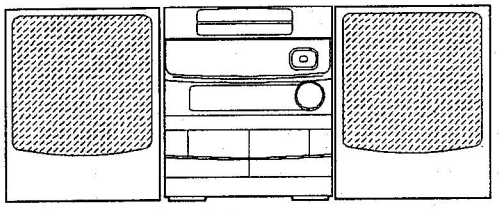
aiwa

aiwa SERVICE

NSX-AV40

SERVICE MANUAL



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 2ZM-3MK2 PR1N
- BASIC CD MECHANISM : 3ZG-3 YA3N
- TYPE : EZ

SYSTEM	CD – CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-AV40	CX-NAV40 (TYPE : EZ)	SX-NAV70 SX-CR423	RC UNIT,6AS17

S/M Code No. 09-96A-162-3FE

TABLE OF CONTENTS

ACCESSORIES / PACKAGE LIST 3
SPECIFICATIONS 3
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING 4
PRECAUTION TO REPLACE OPTICAL BLOCK 4
ELECTRICAL MAIN PARTS LIST ..... 5~9
TRANSISTOR ILLUSTRATION 10
BLOCK DIAGRAM – 1 (MAIN / FRONT) 11,12
BLOCK DIAGRAM – 2 (CD) 13,14
BLOCK DIAGRAM – 3 (TUNER) 15
IC BLOCK DIAGRAM – 1 16
WIRING – 1 (MAIN) 17,18
SCHEMATIC DIAGRAM – 1 (MAIN) ..... 19~21
IC BLOCK DIAGRAM – 2 ..... 22~24
WIRING – 2 (FRONT) 23,24
SCHEMATIC DIAGRAM – 2 (FRONT) 25,26
WIRING – 3 (MVR / SURROUND AMP) 27, 28
SCHEMATIC DIAGRAM – 3 (MVR / SURROUND AMP) 29,30
WIRING – 4 (CD) 31,32
SCHEMATIC DIAGRAM – 4 (CD) 33,34
WIRING – 5 (PT) 35
WIRING – 6 (DECK) 36
FL GRID ASSIGNMENT / ANODE CONNECTION 37
IC BLOCK DIAGRAM – 3 38
IC DESCRIPTION ..... 39~46
ADJUSTMENT – 1 <TUNER / DECK> 47,48
PRACTICAL SERVICE FIGURE 49
ADJUSTMENT – 2 <CD> 50
MECHANICAL EXPLODED VIEW 1 / 1 51,52
MECHANICAL PARTS LIST 1 / 1 53
TAPE MECHANISM EXPLODED VIEW 1 / 1 54,55
TAPE MECHANISM PARTS LIST 1 / 1 56
SPRING APPLICATION POSITION 57
CD MECHANISM EXPLODED VIEW 1 / 2 58
CD MECHANISM PARTS LIST 1 / 2 59
CD MECHANISM EXPLODED VIEW 2 / 2 60
CD MECHANISM PARTS LIST 2 / 2 61
SPEAKER PARTS LIST (SX-CR423) 61
SPEAKER DISASSEMBLY INSTRUCTION (SX-NAV70) 62
SPEAKER PARTS LIST (SX-NAV70) 62
REFERENCE NAME LIST 63

SPECIFICATIONS

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna	75 ohms (unbalanced)

<AM (MW) tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 μV/m
Antenna	Loop antenna

<LW tuner section>

Tuning range	144 kHz ~ 290 kHz
Usable sensitivity	1400 μV/m
Antenna	Loop antenna

<Amplifier section>

Power output	**Front** Rated: 30 W + 30 W (6 ohms, T.H.D. 1%, 1 kHz/DIN 45500) Reference: 38 W + 38 W (6 ohms, T.H.D. 10%, 1 kHz/DIN 45324) DIN MUSIC POWER 60 W + 60 W **Surround (Rear)** Rated: 10 W + 10 W (16 ohms, T.H.D. 1%, 1 kHz/DIN 45500) Reference: 13 W + 13 W (16 ohms, T.H.D. 10%, 1 kHz/DIN 45324) DIN MUSIC POWER 20 W + 20 W **Center** Rated: 20 W (8 ohms, T.H.D. 1%, 1 kHz/DIN 45500) Reference: 26 W (8 ohms, T.H.D. 10%, 1 kHz/DIN 45324) DIN MUSIC POWER 40 W
Total Harmonic distortion	0.05% (15 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 150mV MIC 1, MIC 2: 1.7 mV
Outputs	SUPER WOOFER: 1.2 V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS: accept speakers of 16 ohms or more CENTER SPEAKERS: accept speakers of 8 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz –15000 Hz
Signal-to-noise ratio	47 dB (CrO_2 tape peak level)
Recording system	AC bias
Heads	Deck 1: Playback head x 1 Deck 2: Recording/playback/ erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.03% (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX–NAV70>

Cabinet type	3 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 140 mm cone type Tweeter: 60mm cone type Super tweeter: 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	235 x 302 x 250 mm
Weight	3.1 kg

<General>

Power requirements	230 V AC, 50 Hz
Power consumption	330 W
Dimensions of main unit (W x H x D)	260 x 306 x 345 mm
Weight of main unit	7.8 kg

- Design and specifications are subject to change without notice.

- Manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY", the double-D symbol ⧈ and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

ACCESSORIES / PACKAGE LIST

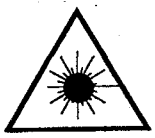
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NES-901-010		IB,E(EGFSI)M
1	86-NES-902-010		IB,E(EGFSI)NE
2	86-NES-701-010		RC UNIT,6AS17
3	87-006-225-010		ANT,LOOP ANT NC2
4	87-043-106-010		ANT,FM 1007AWG

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. *Undgå udsættelse for stråling.*

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

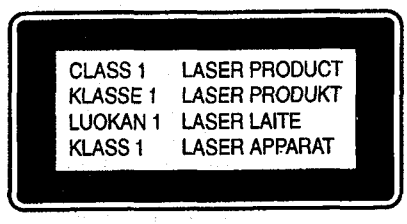
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

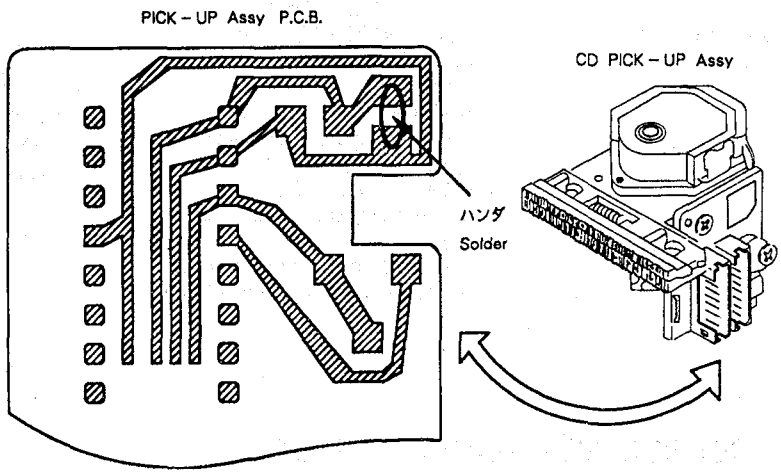


Precaution to replace Optical block

(KSS – 212A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-027-666-019		IC,TC4052BP
	87-A20-101-019		IC,STK405-070A
	87-017-374-019		IC,TC4094BP
	87-070-121-010		IC,HA12185NT
	87-070-336-010		IC,TC9284BF
	87-002-407-010		IC,TA8191F
	87-A20-107-019		IC,BA3836
	87-017-888-089		IC,NJM4558MD
	87-A20-069-049		C-IC,BA3842F
	87-070-127-119		IC,LC72131D
	87-017-714-119		IC,LA1836L
	87-020-454-010		IC,DN6851
	87-001-982-019		IC,TA7291S
	87-002-727-019		IC,NJM4558L
	87-070-305-019		IC,BA6897S
	87-017-825-010		IC,GP1F32T
	87-070-083-019		IC,GP1U281X
	87-017-375-089		IC,TC4094BF
	86-NES-601-010		C-IC,UPD78044HGF-023-3B9
	87-A20-082-010		C-IC,NJW1102AFG1
	87-070-267-010		IC,STK405-050
	87-A20-067-040		C-IC,M65849FP
TRANSISTOR			
	87-026-610-089		TR,KTC3198GR
	89-327-125-089		C-TR,2SC2712GR
	89-111-625-089		C-TR,2SA1162GR
	87-026-609-089		TR,KTA1266GR
	89-213-702-019		TR 2SB1370E
	89-332-665-089		TR,2SC3266GR
	89-406-555-089		TR,2SD655E
	89-502-466-089		TR,FET 2SK246-BL(TPE2)
	87-026-286-089		TR,DTA143ES
	87-026-463-089		TR,2SA933S(RS)
	89-333-317-089		TR,2SC3331T
	87-026-486-089		TR,DTA144TS
	89-109-521-089		TR,2SA952K
	89-112-965-089		TR,2SA1296GR
	87-026-219-089		TR,DTA144ES
	89-327-143-089		C-TR,2SC2714 (O)
	87-026-269-089		TR,DTA114ES
	89-503-602-089		C-FET,2SK360E
	87-026-214-089		TR,DTA114YS
	89-505-434-549		C-FET,2SK543(4/5)
	87-026-462-089		TR,2SC1740SRS
	89-320-011-089		TR,2SC2001K
	89-113-187-889		TR,2SA1318TU
	87-026-228-089		C-TR,DTA124EK
	87-026-238-089		C-TR,DTC144WK
	89-333-266-080		C-TR,2SC3326B
	87-026-230-010		C-TR,DTA114YK
	87-026-210-010		C-TR,DTC144EK
DIODE			
	87-020-027-089		C-DIODE,1SS184
	87-020-125-089		C-DIODE,1SS181
	87-017-078-089		DIODE,1N4003
	87-017-437-089		DIODE,1N4148M
	87-A40-116-069		DIODE,RS403L-B-D-51
	87-020-465-089		DIODE,1SS133 T-72
	87-020-330-089		C-DIODE,DAP202K
	87-001-914-089		ZENER UTZJ 6.2B
	87-001-911-089		ZENER,UTZJ4.7A (TAPG)
	87-A40-209-089		ZENER,UZ27BSD
	87-A40-200-089		ZENER,UZL11L3
	87-A40-202-089		ZENER,UZ5.1BSB
	87-017-093-080		ZENER,HZS5C3
	87-001-290-080		ZENER,HZS6B1L
MAIN C.B			
BPF831	87-030-105-019		FLTR,BPMB6A
C131	87-010-403-089		CAP,E 3.3-50 SME
C141	87-010-384-089		CAP,E 100-25 SME
C142	87-010-384-089		CAP,E 100-25 SME
C143	87-010-764-089		CAP,E 47-63V
C144	87-010-196-089		C-CAP,S 0.1-25 F
C145	87-010-196-089		C-CAP,S 0.1-25 F
C146	87-010-390-019		CAP,E 3300-25 SME
C151	87-012-368-089		C-CAP,S 0.1-50F
C152	87-012-368-089		C-CAP,S 0.1-50F
C153	87-016-474-099		CAP,E 3300-50
C154	87-016-474-099		CAP,E 3300-50
C161	87-010-401-089		CAP,E 1-50 SME
C172	87-012-140-089		C-CAP,S 470P-50 CH
C173	87-010-405-089		CAP,E 10-50 SME
C181	87-010-101-089		CAP,E 220-16 SME
C182	87-010-381-089		CAP,E 330-16 SME
C197	87-010-196-089		C-CAP,S 0.1-25 F
C198	87-010-196-089		C-CAP,S 0.1-25 F
C200	87-010-196-089		C-CAP,S 0.1-25 F
C201	87-010-404-089		CAP,E 4.7-50 SME
C202	87-010-404-089		CAP,E 4.7-50 SME
C203	87-010-177-089		C-CAP,S 820P-50 SL
C204	87-010-177-089		C-CAP,S 820P-50 SL
C205	87-010-182-089		C-CAP,S 2200P-50 B
C206	87-010-182-089		C-CAP,S 2200P-50 B
C207	87-010-402-089		CAP,E 2.2-50 SME
C208	87-010-402-089		CAP,E 2.2-50 SME
C209	87-010-402-089		CAP,E 2.2-50 SME
C210	87-010-402-089		CAP,E 2.2-50 SME
C211	87-010-318-089		C-CAP,S 47P-50 CH
C212	87-010-318-089		C-CAP,S 47P-50 CH
C213	87-010-147-089		C-CAP,S 3P-50 CH
C214	87-010-147-089		C-CAP,S 3P-50 CH
C215	87-010-196-089		C-CAP,S 0.1-25 F
C216	87-010-196-089		C-CAP,S 0.1-25 F
C217	87-010-196-089		C-CAP,S 0.1-25 F
C218	87-010-196-089		C-CAP,S 0.1-25 F
C219	87-010-198-089		C-CAP,S 0.022-25 B
C220	87-010-198-089		C-CAP,S 0.022-25 B
C221	87-010-194-089		C-CAP,S 0.047-25 F
C223	87-010-178-089		C-CAP,S 1000P-50 B
C224	87-010-178-089		C-CAP,S 1000P-50 B
C230	87-018-209-089		CAP,TC-U 0.1-50F
C261	87-010-197-089		C-CAP,S 0.01-25 B
C262	87-010-197-089		C-CAP,S 0.01-25 B
C263	87-010-197-089		C-CAP,S 0.01-25 B
C264	87-010-197-089		C-CAP,S 0.01-25 B
C301	87-010-197-089		C-CAP,S 0.01-25 B
C311	87-012-155-089		C-CAP,S 180P-50 CH
C312	87-012-155-089		C-CAP,S 180P-50 CH
C313	87-010-180-089		C-CAP,S 1800P-50 B
C314	87-010-180-089		C-CAP,S 1800P-50 B
C321	87-012-145-089		C-CAP S 270P-50CH
C322	87-012-145-089		C-CAP S 270P-50CH
C323	87-012-154-089		C-CAP,S 150P-50 CH
C324	87-012-154-089		C-CAP,S 150P-50 CH
C325	87-010-179-089		C-CAP,S 1200P-50 B
C326	87-010-179-089		C-CAP,S 1200P-50 B
C333	87-010-198-089		C-CAP,S 0.022-25 B
C334	87-010-198-089		C-CAP,S 0.022-25 B
C335	87-010-189-089		C-CAP,S 8200P-50 B
C336	87-010-189-089		C-CAP,S 8200P-50 B
C337	87-010-400-089		CAP,E 0.47-50 SME
C338	87-010-400-089		CAP,E 0.47-50 SME
C339	87-010-371-089		CAP,E 470-6.3 11L

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C340	87-010-196-089		C-CAP,S 0.1-25 F
C351	87-010-546-089		CAP,E 0.33-50 SME
C352	87-010-546-089		CAP,E 0.33-50 SME
C353	87-010-401-089		CAP,E 1-50 SME
C354	87-010-401-089		CAP,E 1-50 SME
C355	87-010-401-089		CAP,E 1-50 SME
C356	87-010-401-089		CAP,E 1-50 SME
C357	87-010-178-089		C-CAP,S 1000P-50 B
C359	87-010-196-089		C-CAP,S 0.1-25 F
C360	87-010-196-089		C-CAP,S 0.1-25 F
C371	87-012-156-089		C-CAP,S 220P-50 CH
C372	87-012-156-089		C-CAP,S 220P-50 CH
C373	87-010-177-089		C-CAP,S 820P-50 SL
C374	87-010-175-089		C-CAP,S 560P-50 UJ
C376	87-010-392-089		CAP,E 33-35 SME
C377	87-010-198-089		C-CAP,S 0.022-25 B
C378	87-010-197-089		C-CAP,S 0.01-25 B
C379	87-010-183-089		C-CAP,S 2700P-50 B
C380	87-010-183-089		C-CAP,S 2700P-50 B
C381	87-010-183-089		C-CAP,S 2700P-50 B
C405	87-010-545-089		CAP,E 0.22-50 SME
C406	87-010-545-089		CAP,E 0.22-50 SME
C407	87-010-400-089		CAP,E 0.47-50 SME
C408	87-010-400-089		CAP,E 0.47-50 SME
C409	87-010-405-089		CAP,E 10-50 SME
C451	87-010-187-089		C-CAP,S 0.01-25 B
C453	87-010-312-089		C-CAP,S 15P-50 CH
C454	87-012-145-089		C-CAP,S 270P-50 CH
C455	87-010-197-089		C-CAP,S 0.01-25 B
C456	87-010-402-089		CAP,E 2.2-50 SME
C523	87-010-178-089		C-CAP,S 1000P-50 B
C524	87-010-178-089		C-CAP,S 1000P-50 B
C527	87-010-220-089		C-CAP,S 0.018-25 B
C528	87-010-220-089		C-CAP,S 0.018-25 B
C529	87-010-400-089		CAP,E 0.47-50 SME
C530	87-010-400-089		CAP,E 0.47-50 SME
C531	87-010-382-089		CAP,E 22-25 SME
C532	87-010-198-089		C-CAP,S 0.022-25 B
C553	87-010-194-089		C-CAP,S 0.047-25 F
C554	87-010-183-089		C-CAP,S 2700P-50 B
C555	87-010-196-089		C-CAP,S 0.1-25 F
C556	87-010-263-089		CAP,E 100-10 SME 5X11
C557	87-010-596-089		C-CAP,S 0.047-16 RK
C558	87-010-545-089		CAP,E 0.22-50 SME
C562	87-010-596-089		C-CAP,S 0.047-16 RK
C601	87-010-198-089		C-CAP,S 0.022-25 B
C701	87-010-404-089		CAP,E 4.7-50 SME
C702	87-010-197-089		C-CAP,S 0.01-25 B
C703	87-010-197-089		C-CAP,S 0.01-25 B
C704	87-010-178-089		C-CAP,S 1000P-50 B
C707	87-010-402-089		CAP,E 2.2-50 SME
C708	87-010-402-089		CAP,E 2.2-50 SME
C711	87-010-263-089		CAP,E 100-10 SME 5X11
C712	87-010-112-089		CAP,E 100-16 11L
C722	87-010-152-089		C-CAP,S 8P-50 CH
C723	87-010-178-089		C-CAP,S 1000P-50 B
C725	87-010-178-089		C-CAP,S 1000P-50 B
C727	87-010-196-089		C-CAP,S 0.1-25 F
C728	87-010-248-089		CAP,E 220-10 SME
C729	87-010-197-089		C-CAP,S 0.01-25 B
C730	87-018-134-089		CAP,TC-U 0.01-16 Y
C744	87-018-134-089		CAP,TC-U 0.01-16 Y
C770	87-010-197-089		C-CAP,S 0.01-25 B
C771	87-010-405-089		CAP,E 10-50 SME
C772	87-010-194-089		C-CAP,S 0.047-25 F
C773	87-010-196-089		C-CAP,S 0.1-25 F
C774	87-010-263-089		CAP,E 100-10 SME 5X11
C775	87-010-405-089		CAP,E 10-50 SME
C776	87-010-197-089		C-CAP,S 0.01-25 B
C777	87-010-400-089		CAP,E 0.47-50 SME
C778	87-010-401-089		CAP,E 1-50 SME
C779	87-010-401-089		CAP,E 1-50 SME
C780	87-010-197-089		C-CAP,S 0.01-25 B
C781	87-010-404-089		CAP,E 4.7-50 SME
C782	87-010-404-089		CAP,E 4.7-50 SME
C787	87-010-184-089		C-CAP,S 3300P-50 B
C788	87-010-184-089		C-CAP,S 3300P-50 B
C789	87-010-179-089		C-CAP,S 1200-50 B
C790	87-010-179-089		C-CAP,S 1200-50 B
C791	87-010-401-089		CAP,E 1-50 SME
C792	87-010-183-089		C-CAP,S 2700P-50 B
C793	87-010-189-089		C-CAP,S 8200P-50 B
C794	87-010-260-089		CAP,E 47-25 SME
C795	87-010-194-089		C-CAP,S 0.047-25 F
C796	87-010-403-089		CAP,E 3.3-50 SME
C797	87-010-197-089		C-CAP,S 0.01-25 B
C799	87-010-405-089		CAP,E 10-50 SME
C801	87-010-197-089		C-CAP,S 0.01-25 B
C802	87-010-312-089		C-CAP,S 15P-50 CH
C803	87-018-134-089		CAP,TC-U 0.01-16 Y
C805	87-010-146-089		C-CAP,S 2P-50 CH
C806	87-010-147-089		C-CAP,S 3P-50 CH
C807	87-010-312-089		C-CAP,S 15P-50 CH
C808	87-010-322-089		C-CAP,S 100P-50 CH
C809	87-010-197-089		C-CAP,S 0.01-25 B
C810	87-010-197-089		C-CAP,S 0.01-25 B
C811	87-010-149-089		C-CAP,S 5P-50 CH
C812	87-010-314-089		C-CAP,S 22P-50 CH
C813	87-010-197-089		C-CAP,S 0.01-25 B
C814	87-010-197-089		C-CAP,S 0.01-25 B
C817	87-010-196-089		C-CAP,S 0.1-25 F
C820	87-010-260-089		CAP,E 47-25 SME
C821	87-010-197-089		C-CAP,S 0.01-25 B
C823	87-010-197-089		C-CAP,S 0.01-25 B
C825	87-010-196-089		C-CAP,S 0.1-25 F
C827	87-010-145-089		C-CAP,S 1P-50 CH
C831	87-010-312-089		C-CAP,S 15P-50 CH
C832	87-010-314-089		C-CAP,S 22P-50 CH
C833	87-010-197-089		C-CAP,S 0.01-25 B
C834	87-010-311-089		C-CAP,S 12P-50 CH
C835	87-010-154-089		C-CAP,S 10P-50 CH
C836	87-010-312-089		C-CAP,S 15P-50 CH
C837	87-010-312-089		C-CAP,S 15P-50 CH
C843	87-010-146-089		C-CAP,S 2P-50 CH
C849	87-010-197-089		C-CAP,S 0.01-25 B
C851	87-010-197-089		C-CAP,S 0.01-25 B
C901	87-010-197-089		C-CAP,S 0.01-25 B
C942	87-010-148-089		C-CAP,S 4P-50 CH
C946	87-010-401-089		CAP,E 1-50 SME
C952	87-010-197-089		C-CAP,S 0.01-25 B
C955	87-010-197-089		C-CAP,S 0.01-25 B
C957	87-010-315-089		C-CAP,S 27P-50CH
C958	87-010-197-089		C-CAP,S 0.01-25 B
C960	87-010-196-089		C-CAP,S 0.1-25 F
C988	87-010-198-089		C-CAP,S 0.022-25 B
C999	87-010-196-089		C-CAP,S 0.1-25 F
CF801	87-008-423-089		CF,SFE 10.7 MS3G-A
CF802	82-785-747-089		CF,MS2 GHY,R
CON351	83-NEG-608-010		CONN ASSY,8P-RPB
D801	87-002-730-089		VARI-CAP SVC203SPA
D802	87-002-730-089		VARI-CAP SVC203SPA
D803	87-002-730-089		VARI-CAP SVC203SPA
D804	87-002-730-089		VARI-CAP SVC203SPA
FT510	88-906-171-110		FF CABLE 6P-1.25
IFT806	87-A50-018-019		COIL,FM IFT(4T)COI
J241	87-A60-031-019		JACK,6.3 BLK ST W/S
J261	87-033-240-019		TERMINAL,SP 4P 324V1-05
J281	87-099-801-019		JACK,PIN 1P BLK
J501	87-099-715-019		JACK,PIN 2P
J802	87-033-241-019		TERMINAL,ANT AJ-2039

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L261	87-003-383-019		COIL,1UH-S
L262	87-003-383-019		COIL,1UH-S
L351	87-A50-102-019		COIL,TRAP 85K
L352	87-007-341-019		COIL,TRAP 85K
L371	87-007-342-019		COIL,OSC 85K BIAS
L701	87-A50-027-019		COIL,1 POLE MPX (TOK)
L702	87-A50-027-019		COIL,1 POLE MPX (TOK)
L741	87-A50-015-019		COIL,FM DET(TOK)
L742	87-A90-051-019		FLTR,CFAZ-450(TOK)
L770	87-003-102-089		COIL,10UH(CECS)
L790	87-005-564-089		C-COIL,2.2UH
L801	87-006-249-019		COIL,ANT FM3/4TS,L4
L802	87-006-251-019		COIL,ANT FM2-3/4TS,L4
L803	87-006-244-019		COIL,RF FM 3-1/2T,L4
L804	87-006-250-019		COIL,RF FM 3-1/2TS,L4
L805	87-003-098-089		COIL,2.2UH(CECS)
L807	87-A50-031-019		COIL,FM OSC (TOK)
L831	87-006-250-019		COIL,RF FM 3-1/2TS,L4
L832	87-003-098-089		COIL,2.2UH(CECS)
L941	87-A50-020-019		COIL,ANT LW
L942	87-A50-019-019		COIL,OSC LW
L981	86-NF4-665-019		AM PACK 1(TOK)
R191	87-022-050-089		RESIS METAL 1W-0.22J
R192	87-022-050-089		RESIS METAL 1W-0.22J
RY151	87-045-361-019		RELAY,DH12D2-OS(M)-2
SFR311	87-024-177-089		SFR 220K DIA.6 V
SFR312	87-024-177-089		SFR 220K DIA.6 V
SFR321	87-024-177-089		SFR 220K DIA.6 V
SFR322	87-024-177-089		SFR 220K DIA.6 V
SFR371	87-024-175-089		SFR,47K DIA6 V
SFR372	87-024-175-089		SFR,47K DIA6 V
SFR401	87-024-175-089		SFR,47K DIA6 V
SFR402	87-024-175-089		SFR,47K DIA6 V
SFR722	87-024-353-089		SFR,10K DIA6 H
TC721	87-011-253-089		TRIMER,30P LAR
TC801	87-011-252-089		TRIMMER 10P LAR
TC802	87-011-252-089		TRIMMER 10P LAR
TC803	87-011-252-089		TRIMMER 10P LAR
TC942	87-011-253-089		TRIMER,30P LAR
VR501	82-NF5-660-019		VR,50KBX2 RK14K12A
W111	85-NF5-628-019		F-CABLE 7P-2.5
X703	84-508-618-019		VIB,CER CSB 456 F/5
X721	87-030-372-019		VIB,XTAL 7.2MHZ

FRONT C.B

C201	87-018-134-080		CAP,TC-U 0.01-16 Y
C203	87-010-182-080		C-CAP,S 2200P-50 K B
C204	87-010-313-080		C-CAP,S 18P-50 J CH
C205	87-010-314-080		C-CAP,S 22P-50 CH
C206	87-012-140-080		C-CAP,S 470P-50 J CH
C207	87-012-368-080		C-CAP,S 0.1-50 Z F
C251	87-010-405-040		CAP,E 10-50 SME
C252	87-010-555-040		CAP,E 100-10 5L SRE
C253	87-010-754-040		CAP,E 220-10 7L SRE
C255	87-010-401-040		CAP,E 1-50 SME
C256	87-010-401-040		CAP,E 1-50 SME
C257	87-010-196-080		C-CAP,S 0.1-25 Z F
C258	87-018-209-080		CAP,TC-U 0.1-50 F
C259	87-018-209-080		CAP,TC-U 0.1-50 F
C351	87-010-404-040		CAP,E 4.7-50 SME
C352	87-010-404-040		CAP,E 4.7-50 SME
C353	87-010-408-040		CAP,E 47-50 SME
C403	87-010-196-080		C-CAP,S 0.1-25 Z F
C404	87-018-209-080		CAP,TC-U 0.1-50 F
C508	87-010-112-080		CAP,E 100-16 SME
C601	87-010-405-040		CAP,E 10-50 SME
C602	87-010-248-080		CAP,E 220-10 SME
C603	87-010-197-080		C-CAP,S 0.01-25 K B
C604	87-010-186-080		C-CAP,S 4700P-50 K B
C605	87-010-545-080		CAP,E 0.22-50 SME
C606	87-010-321-080		C-CAP,S 82P-50 J CH
C608	87-010-196-080		C-CAP,S 0.1-25 Z F
C609	87-010-177-080		C-CAP,S 820P-50 J SL
C610	87-010-318-080		C-CAP,S 47P-50 CH
C615	87-010-401-040		CAP,E 1-50 SME
C631	87-010-197-080		C-CAP,S 0.01-25 K B
C641	87-010-196-080		C-CAP,S 0.1-25 Z F
C652	87-010-196-080		C-CAP,S 0.1-25 Z F
C653	87-010-545-080		CAP,E 0.22-50 SME
C654	87-010-178-080		C-CAP,S 1000P-50 K B
C715	87-010-555-040		CAP,E 100-10 5L SRE
C851	87-010-196-080		C-CAP,S 0.1-25 Z F
C853	87-010-406-040		CAP,E 22-50 SME
C854	87-010-405-040		CAP,E 10-50 SME
FB601	87-008-372-080		FLTR,EMIBL01 RN1
FFC102	88-910-331-110		FF-CABLE, 10P 1.25
FFC103	88-918-131-110		FF-CABLE, 18P 1.25 130
FFC501	88-915-261-210		FF-CABLE, 15P 1.25
FL101	86-NE5-625-010		FL,8-BT-194GK
J600	82-NF7-630-010		JACK,3.5 MO
J601	82-NF7-630-010		JACK,3.5 MO
L201	87-007-340-010		COIL,CLOCK 4.19HZ
L250	87-003-098-080		COIL,2.2 UH
LED401	87-017-784-080		LED,SEL1550CM TP8 PGRN
LED402	87-017-784-080		LED,SEL1550CM TP8 PGRN
LED403	87-017-784-080		LED,SEL1550CM TP8 PGRN
LED404	87-017-784-080		LED,SEL1550CM TP8 PGRN
LED405	87-017-784-080		LED,SEL1550CM TP8 PGRN
LED406	87-017-784-080		LED,SEL1550CM TP8 PGRN
LED407	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED408	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED409	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED410	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED411	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED412	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED413	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED414	87-070-199-080		LED,SLP-738F-81-S-T1 P-GRN
LED420	87-070-201-080		LED,SLP-9118C-51-S RED
LED421	87-070-201-080		LED,SLP-9118C-51-S RED
LED422	87-070-201-080		LED,SLP-9118C-51-S RED
LED423	87-070-201-080		LED,SLP-9118C-51-S RED
LED424	87-070-201-080		LED,SLP-9118C-51-S RED
LED425	87-070-201-080		LED,SLP-9118C-51-S RED
LED426	87-070-201-080		LED,SLP-9118C-51-S RED
LED427	87-070-201-080		LED,SLP-9118C-51-S RED
LED428	87-070-201-080		LED,SLP-9118C-51-S RED
LED429	87-070-201-080		LED,SLP-9118C-51-S RED
LED430	87-070-201-080		LED,SLP-9118C-51-S RED
LED431	87-070-201-080		LED,SLP-9118C-51-S RED
LED432	87-070-201-080		LED,SLP-9118C-51-S RED
LED433	87-070-201-080		LED,SLP-9118C-51-S RED
LED434	87-070-201-080		LED,SLP-9118C-51-S RED
R754	87-029-017-010		FUSE,RES 10-1/4W J
S301	87-A90-164-080		SW,TACT SKQNAB(N)
S302	87-A90-164-080		SW,TACT SKQNAB(N)
S303	87-A90-164-080		SW,TACT SKQNAB(N)
S304	87-A90-164-080		SW,TACT SKQNAB(N)
S306	87-A90-164-080		SW,TACT SKQNAB(N)
S307	87-A90-164-080		SW,TACT SKQNAB(N)
S310	87-A90-164-080		SW,TACT SKQNAB(N)
S311	87-A90-164-080		SW,TACT SKQNAB(N)
S312	87-A90-164-080		SW,TACT SKQNAB(N)
S313	87-A90-164-080		SW,TACT SKQNAB(N)
S314	87-A90-164-080		SW,TACT SKQNAB(N)
S315	87-A90-164-080		SW,TACT SKQNAB(N)
S316	87-A90-164-080		SW,TACT SKQNAB(N)
S317	87-A90-164-080		SW,TACT SKQNAB(N)
S318	87-A90-164-080		SW,TACT SKQNAB(N)
S319	87-A90-164-080		SW,TACT SKQNAB(N)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S320	87-A90-164-080		SW,TACT SKQNAB(N)
S321	87-A90-164-080		SW,TACT SKQNAB(N)
S322	87-A90-164-080		SW,TACT SKQNAB(N)
S323	87-A90-164-080		SW,TACT SKQNAB(N)
S324	87-A90-164-080		SW,TACT SKQNAB(N)
S325	87-A90-164-080		SW,TACT SKQNAB(N)
S326	87-A90-164-080		SW,TACT SKQNAB(N)
VR601	82-NK7-615-010		VR,10KA RK11K1130
VR801	86-NES-603-010		VR,RTRY 100KB/RK11K1130
MVR C.B			
C451	87-010-176-080		C-CAP,S 680P-50 J SL
C452	87-010-176-080		C-CAP,S 680P-50 J SL
C457	87-010-405-080		CAP,E 10-50 SME
C458	87-010-405-080		CAP,E 10-50 SME
C459	87-016-456-080		CAP,E 22-16 LLA
C460	87-010-112-080		CAP,E 100-16 SME
C461	87-016-081-080		C-CAP,S 0.1-16 K R
C462	87-010-260-080		CAP,E 47-25 SME
C464	87-016-472-080		CAP,E 22-16 K SME
C465	87-010-263-080		CAP,E 100-10 SME
C467	87-010-378-080		CAP,E 10-16 SME
C468	87-010-378-080		CAP,E 10-16 SME
C469	87-010-378-080		CAP,E 10-16 SME
C470	87-010-378-080		CAP,E 10-16 SME
C471	87-010-378-080		CAP,E 10-16 SME
C472	87-010-101-080		CAP,E 220-16 SME
C473	87-012-140-080		C-CAP,S 470P-50 J CH
C474	87-010-187-080		C-CAP,S 5600P-50 K B
C475	87-010-186-080		C-CAP,S 4700P-50 K B
C478	87-012-394-080		C-CAP, 0.68-16 K W5R CM/CB
C479	87-012-393-080		C-CAP,S 0.22-16 K W5R CM/CB
C480	87-012-393-080		C-CAP,S 0.22-16 K W5R CM/CB
C481	87-010-404-080		CAP,E 4.7-50 SME
C482	87-010-404-080		CAP,E 4.7-50 SME
C483	87-012-393-080		C-CAP,S 0.22-16 K W5R CM/CB
C484	87-012-393-080		C-CAP,S 0.22-16 K W5R CM/CB
C485	87-016-081-080		C-CAP,S 0.1-16 K R
C488	87-016-081-080		C-CAP,S 0.1-16 K R
C489	87-016-081-080		C-CAP,S 0.1-16 K R
C492	87-016-081-080		C-CAP,S 0.1-16 K R
C495	87-010-197-080		C-CAP,S 0.01-25 K B
C671	87-010-402-080		CAP,E 2.2-50 SME
C672	87-010-402-080		CAP,E 2.2-50 SME
C673	87-010-401-080		CAP,E 1-50 SME
C674	87-010-401-080		CAP,E 1-50 SME
C675	87-010-263-080		CAP,E 100-10 SME
C676	87-010-384-080		CAP,E 100-25 SME
C701	87-010-993-080		C-CAP,S 0.056-25 K B MK212
C702	87-010-993-080		C-CAP,S 0.056-25 K B MK212
C703	87-016-460-080		C-CAP,S 0.22-16 K B
C704	87-016-460-080		C-CAP,S 0.22-16 K B
C705	87-016-081-080		C-CAP,S 0.1-16 K R
C706	87-010-260-080		CAP,E 47-25 SME
C707	87-010-182-080		C-CAP,S 2200P-50 K B
C708	87-010-182-080		C-CAP,S 2200P-50 K B
C709	87-010-545-080		CAP,E 0.22-50 SME
C710	87-010-545-080		CAP,E 0.22-50 SME
C711	87-010-401-080		CAP,E 1-50 SME
C712	87-010-401-080		CAP,E 1-50 SME
C713	87-010-260-080		CAP,E 47-25 SME
C714	87-010-405-080		CAP,E 10-50 SME
C717	87-010-401-080		CAP,E 1-50 SME
C718	87-010-401-080		CAP,E 1-50 SME
C773	87-010-198-080		C-CAP,S 0.022-25 B
C871	87-012-358-080		C-CAP,S 0.47-10 Z F
C872	87-010-179-080		C-CAP,S 1200P-50 K B
C873	87-010-180-080		C-CAP,S 1500P-50 K B
C874	87-010-180-080		C-CAP,S 1500P-50 K B
C875	87-010-177-080		C-CAP,S 820P-50 J SL
C876	87-010-182-080		C-CAP,S 2200P-50 K B
C877	87-010-263-080		CAP,E 100-10 SME
C878	87-010-194-080		C-CAP,S 0.047-25 K F
C879	87-012-141-080		C-CAP,S 0.22-16 Z F
C880	87-010-179-080		C-CAP,S 1200P-50 K B
C881	87-010-426-080		C-CAP,S 0.012-25 K B
C883	87-010-404-080		CAP,E 4.7-50 SME
C884	87-010-263-080		CAP,E 100-10 SME
C885	87-010-196-080		C-CAP,S 0.1-25 Z F
C886	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C887	87-010-319-080		C-CAP,S 56P-50 J CH
C888	87-010-319-080		C-CAP,S 56P-50 J CH
C889	87-010-196-080		C-CAP,S 0.1-25 Z F
C891	87-010-197-080		C-CAP,S 0.01-25 K B
C892	87-010-179-080		C-CAP,S 1200P-50 K B
C894	87-012-358-080		C-CAP,S 0.47-10 Z F
FFC671	88-906-211-110		FF-CABLE, 6P 1.25
L871	87-005-440-080		COIL,47UH K FLR50
MVR771	86-NES-602-010		VR,MOT 50KBX4/(M)
R477	87-025-407-080		RES,M/F 100K-1/8W F
SURROUND AMP C.B			
C561	87-010-177-080		C-CAP,S 820P-50 J SL
C562	87-010-177-080		C-CAP,S 820P-50 J SL
C563	87-010-402-080		CAP,E 2.2-50 SME
C564	87-010-402-080		CAP,E 2.2-50 SME
C565	87-010-378-080		CAP,E 10-16 SME
C566	87-010-378-080		CAP,E 10-16 SME
C567	87-010-318-080		C-CAP,S 47P-50 CH
C568	87-010-318-080		C-CAP,S 47P-50 CH
C569	87-010-147-080		C-CAP,S 3P-50 C CH GRM
C570	87-010-147-080		C-CAP,S 3P-50 C CH GRM
C573	87-010-196-080		C-CAP,S 0.1-25 Z F
C574	87-010-196-080		C-CAP,S 0.1-25 Z F
C575	87-010-193-080		C-CAP,S 0.033-25 K F
C576	87-010-193-080		C-CAP,S 0.033-25 K F
C577	87-010-197-080		C-CAP,S 0.01-25 K B
C581	87-010-405-080		CAP,E 10-50 SME
C582	87-010-398-090		CAP,E 2200-35 SME
C583	87-010-398-090		CAP,E 2200-35 SME
C584	87-018-209-080		CAP,TC-U 0.1-50 F
C585	87-018-209-080		CAP,TC-U 0.1-50 F
J561	87-A60-275-010		JACK,PIN 3P OWR W/E
L561	87-003-383-010		COIL,1UH-K
L562	87-003-383-010		COIL,1UH K
R585	87-022-050-080		RES,M/F 0.22-1W J
R586	87-022-050-080		RES,M/F 0.22-1W J
CD C.B			
C001	87-010-382-089		CAP,E 22-25 SME
C002	87-018-134-089		CAP,TC-U 0.01-16 Y
C003	87-010-263-089		CAP,E 100-10 SME 5X11
C004	87-010-401-089		CAP,E 1-50 SME
C005	87-018-140-089		CAP,TC-U 2.2P-50 CH
C007	87-018-113-089		CAP,TC-U 33P-50 SL
C008	87-018-119-089		CAP,TC-U 100P-50 B
C010	87-010-545-089		CAP,E 0.22-50 SMF
C011	87-010-265-089		CAP,E 33-16 SME
C013	87-018-134-089		CAP,TC-U 0.01-16 Y
C014	87-010-248-089		CAP,E 220-10 SME
C015	87-010-374-089		CAP,E 47-10
C016	87-010-403-089		CAP,E 3.3-50 SME
C021	87-018-117-089		CAP,TC-U 68P-50 SL
C022	87-018-201-089		CAP,TC-U 5600P-16 X
C023	87-010-263-089		CAP,E 100-10 SME 5X11
C024	87-018-134-089		CAP,TC-U 0.01-16 Y
C101	87-018-134-089		CAP,TC-U 0.01-16 Y

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C102	87-018-134-089		CAP,TC-U 0.01-16 Y
C103	87-010-374-089		CAP,E 47-10
C104	87-010-374-089		CAP,E 47-10
C106	87-018-134-089		CAP,TC-U 0.01-16 Y
C107	87-010-404-089		CAP,E 4.7-50 SME
C108	87-018-134-089		CAP,TC-U 0.01-16 Y
C109	87-010-248-089		CAP,E 220-10 SME
C110	87-010-263-089		CAP,E 100-10 SME 5X11
C111	87-018-131-089		CAP,TC-U 1000P-50 B
C113	87-010-401-089		CAP,E 1-50 SME
C114	87-010-248-089		CAP,E 220-10 SME
C115	87-018-134-089		CAP,TC-U 0.01-16 Y
C116	87-018-134-089		CAP,TC-U 0.01-16 Y
C117	87-018-119-089		CAP,TC-U 100P-50 B
C118	87-010-263-089		CAP,E 100-10 SME 5X1
C120	87-018-109-089		CAP,TC-U 22P-50 SL
C121	87-018-109-089		CAP,TC-U 22P-50 SL
C122	87-018-115-089		CAP,TC-U 47P-50 SL
C123	87-018-134-089		CAP,TC-U 0.01-16 Y
C125	87-010-401-089		CAP,E 1-50 SME
C201	87-018-115-089		CAP,TC-U 47P-50 SL
C202	87-018-115-089		CAP,TC-U 47P-50 SL
C203	87-018-118-089		CAP,TC-U 82P-50 B
C204	87-018-118-089		CAP,TC-U 82P-50 B
C205	87-018-118-089		CAP,TC-U 82P-50 B
C206	87-018-118-089		CAP,TC-U 82P-50 B
C207	87-018-120-089		CAP,TC-U 120P-50 B
C208	87-018-120-089		CAP,TC-U 120P-50 B
C209	87-018-120-089		CAP,TC-U 120P-50 B
C210	87-018-120-089		CAP,TC-U 120P-50 B
C211	87-010-403-089		CAP,E 3.3-50 SME
C212	87-010-403-089		CAP,E 3.3-50 SME
C213	87-018-133-089		CAP,TC-U 4700P-16 X
C214	87-018-133-089		CAP,TC-U 4700P-16 X
C231	87-010-221-089		CAP,E 470-10
C232	87-010-263-089		CAP,E 100-10 SME 5X11
C302	87-010-404-089		CAP,E 4.7-50 SME
C501	87-018-134-089		CAP,TC-U 0.01-16 Y
C502	87-010-221-089		CAP,E 470-10
C503	87-010-263-089		CAP,E 100-10 SME 5X11
C504	87-018-134-089		CAP,TC-U 0.01-16 Y
C505	87-018-134-089		CAP,TC-U 0.01-16 Y
C506	87-010-221-089		CAP,E 470-10
C601	87-018-134-089		CAP,TC-U 0.01-16 Y
C602	87-010-381-089		CAP,E 330-16 SME
C702	87-018-119-089		CAP,TC-U 100P-50 B
C703	87-018-119-089		CAP,TC-U 100P-50 B
C704	87-018-115-089		CAP,TC-U 47P-50 SL
C707	87-018-131-089		CAP,TC-U 1000P-50 B
CON1	85-NE8-647-019		CONN ASSY,8P-W
CON2	87-NE8-648-019		CONN ASSY,8P-R
CON3	87-NE8-649-019		CONN ASSY,6P-SL
CON4	87-NE8-650-019		CONN ASSY,5P-LM
L002	87-005-730-089		COIL,10UH J SP02
L301	87-005-730-089		COIL,10UH J SP02
SFR001	87-024-176-089		SFR,100K DIA6 V
SFR002	87-024-171-089		SFR,4.7K DIA6 V
X101	87-030-221-089		CERALOCK 16.93MHZ

DRIVE C.B

M1	87-045-358-019		MOT, RF-310TA 43
M2	87-045-356-019		MOT, RF-310TA 30
SW1	87-036-340-019		SW, LEAF LSA-1121

MOTOR CD C.B

M1	87-045-305-019		MOTOR, RF-500TB
SW1	87-036-110-010		SW,PUSH SPPB 62
SW2	87-036-110-010		SW,PUSH SPPB 62

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION

AC C.B

C101	87-010-196-089		C-CAP,S 0.1-25 F
⚠PR101	87-026-681-089		PROTECTOR 5A 491 60V
⚠PR102	87-026-681-089		PROTECTOR 5A 491 60V
R111	87-022-449-089		RES,NF 0.47-1/2WJ
R112	87-022-449-089		RES,NF 0.47-1/2WJ

PT C.B

⚠	82-304-743-019		TERMINAL,1P
⚠F101	87-035-363-019		FUSE,1.25A 250V T E
⚠FC101	87-033-213-089		CLAMP FUSE SMK
⚠FC102	87-033-213-089		CLAMP FUSE SMK
⚠PT101	86-NFT-635-010		PT,6NF-26 EK

DECK C.B

SFR1	87-024-581-089		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-310		SOL ASSY,27
SOL2	82-ZM1-626-310		SOL ASSY,27K
SW1	87-036-378-019		SW,PUSH 1-1-1 SH2
SW2	87-036-378-019		SW,PUSH 1-1-1 SH2
SW3	87-036-378-019		SW,PUSH 1-1-1 SH2
SW4	87-036-378-019		SW,PUSH 1-1-1 SH2
SW5	87-036-378-019		SW,PUSH 1-1-1 SH2
SW6	87-036-378-019		SW,PUSH 1-1-1 SH2
SW8	87-036-378-019		SW,PUSH 1-1-1 SH2
SW9	87-036-378-019		SW,PUSH 1-1-1 SH2

HEAD-1 C.B

HEAD-2 C.B

TRANSISTOR ILLUSTRATION

E C B

2SA1296
2SC3266
KTA1266
KTC3198

E C B

2SA933S
2SC1740
DTA114YS
DTA114ES
DTA144ES
DTA143ES
DTA144TS

S G D

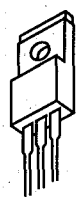
2SK246

E C B

2SA952
2SD655
2SC2001

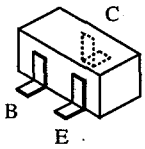
E C B

2SA1318
2SC3331

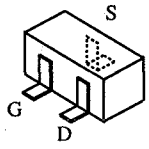


B C E

2SB1370



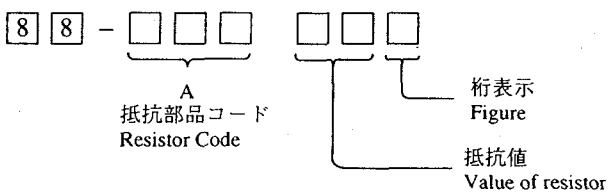
2SA1162
2SC2712
2SC2714
DTA124EK
DTC144WK
2SC3326B
DTA114YK
DTC144EK



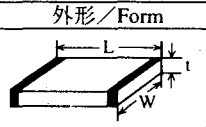
2SK543
2SK360

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

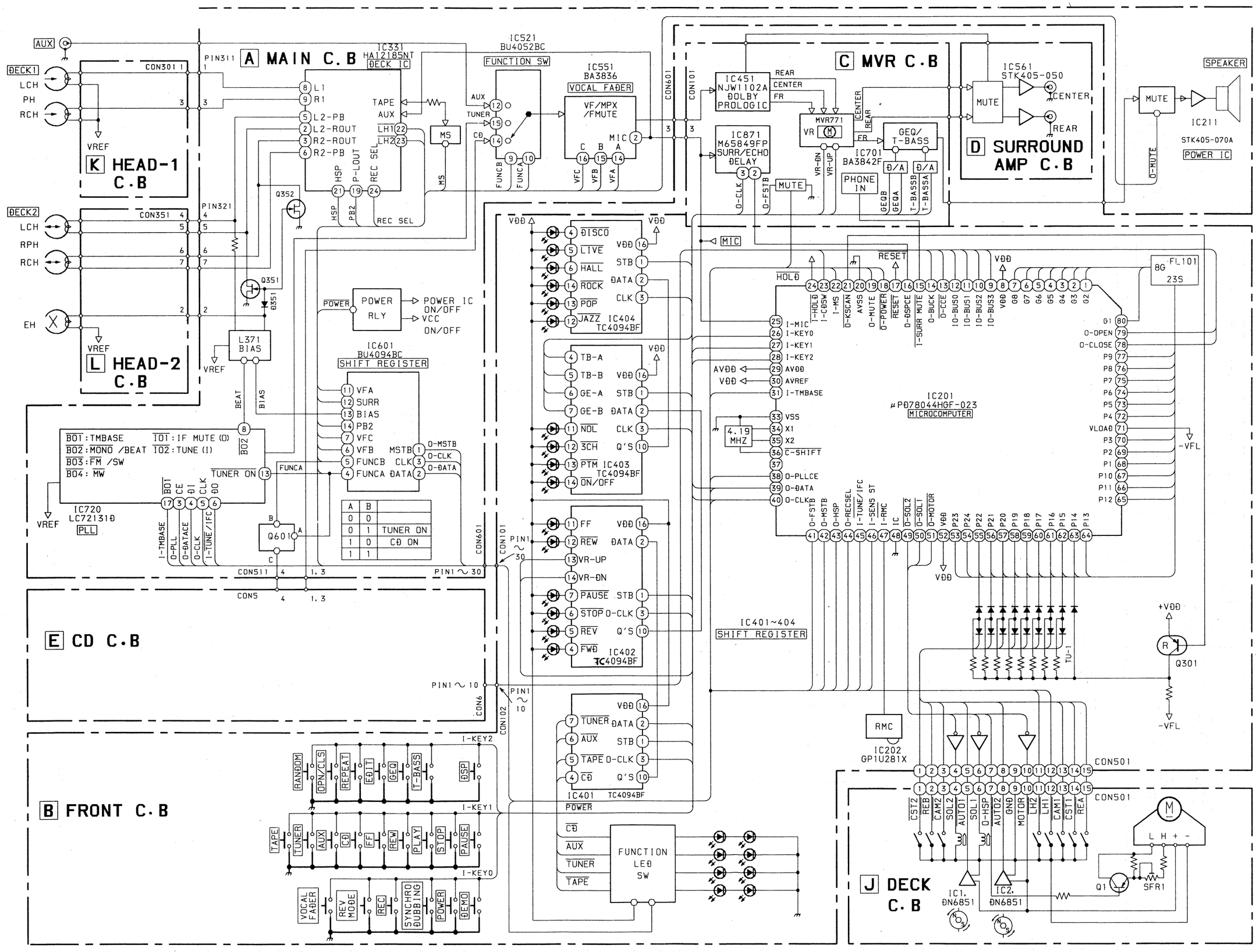
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



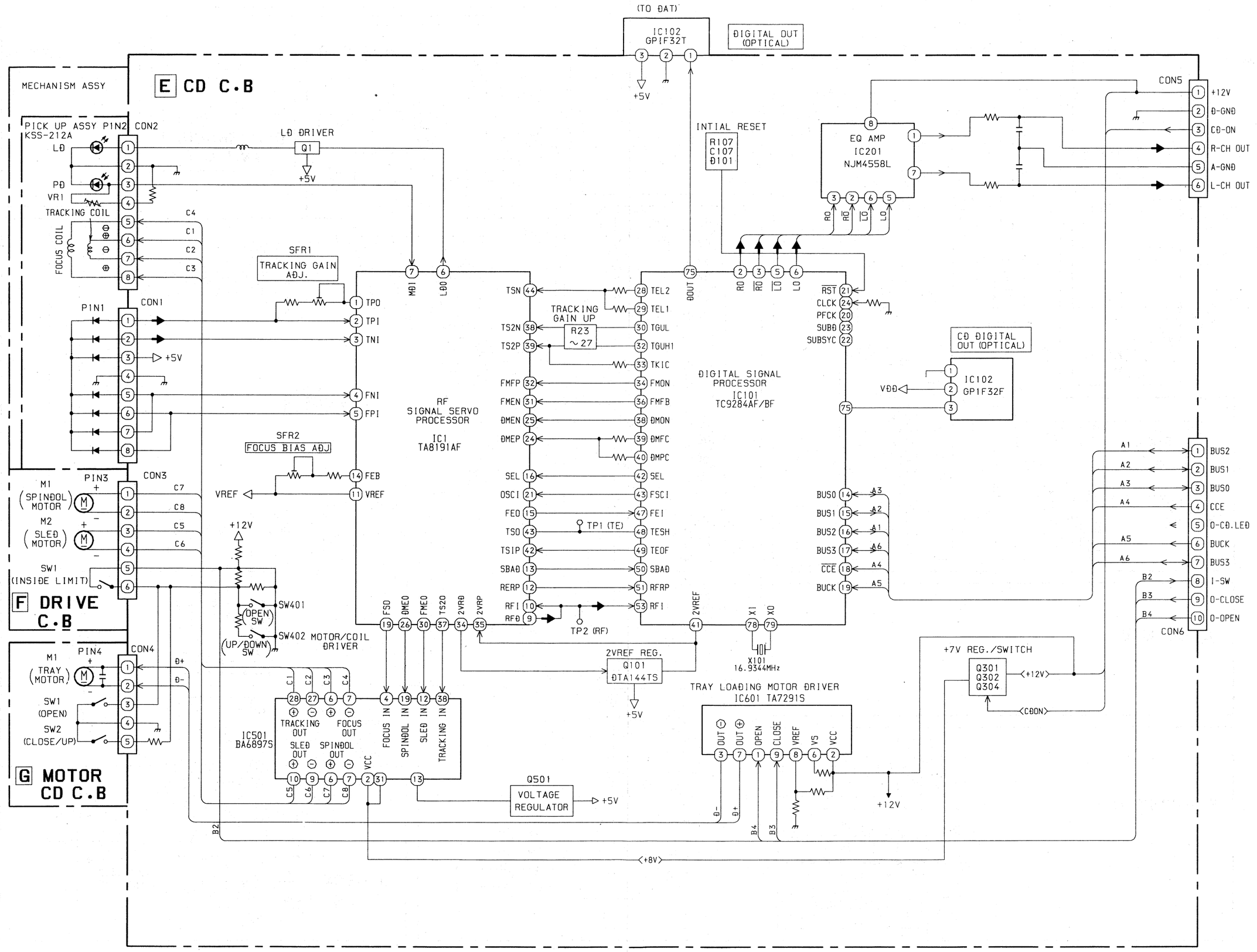
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code: A
1／16W	1608	±5%	CJ		1.6	0.8	0.45	108
1／10W	2125	±5%	CJ		2	1.25	0.45	118
1／8W	3216	±5%	CJ		3.2	1.6	0.55	128

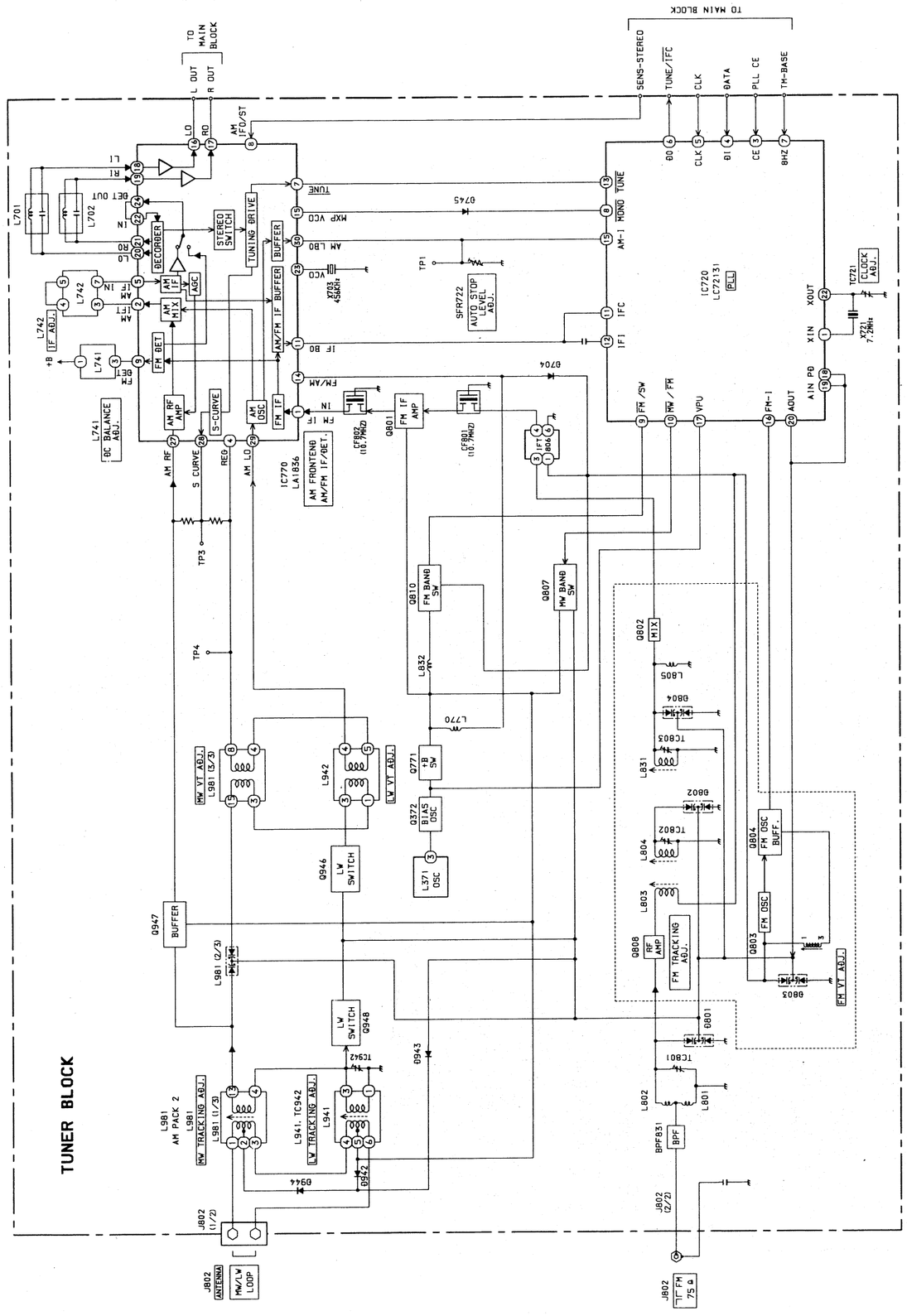
BLOCK DIAGRAM – 1 (MAIN/FRONT)



BLOCK DIAGRAM – 2 (CD)

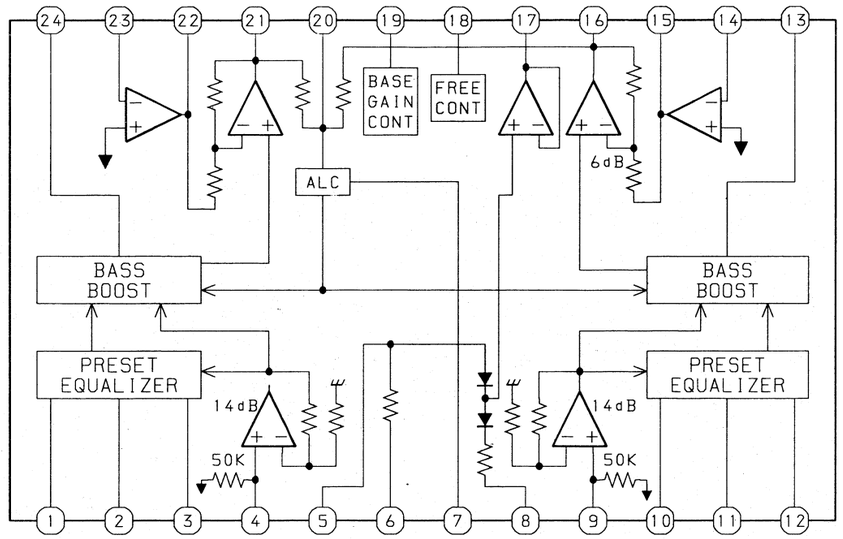


BLOCK DIAGRAM – 3 (TUNER)

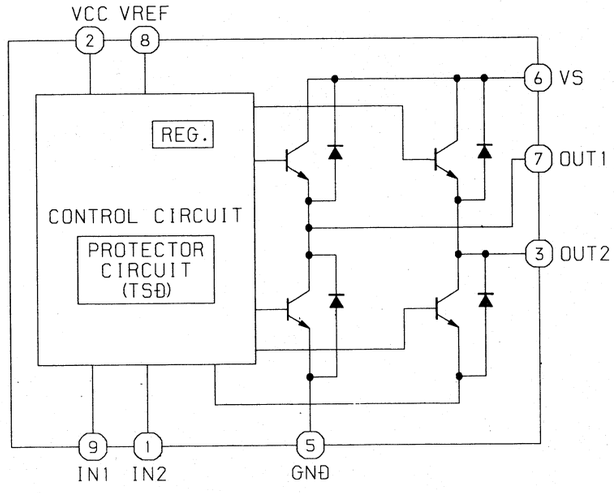


IC BLOCK DIAGRAM – 1

IC,BA3842F



IC,TA7291S

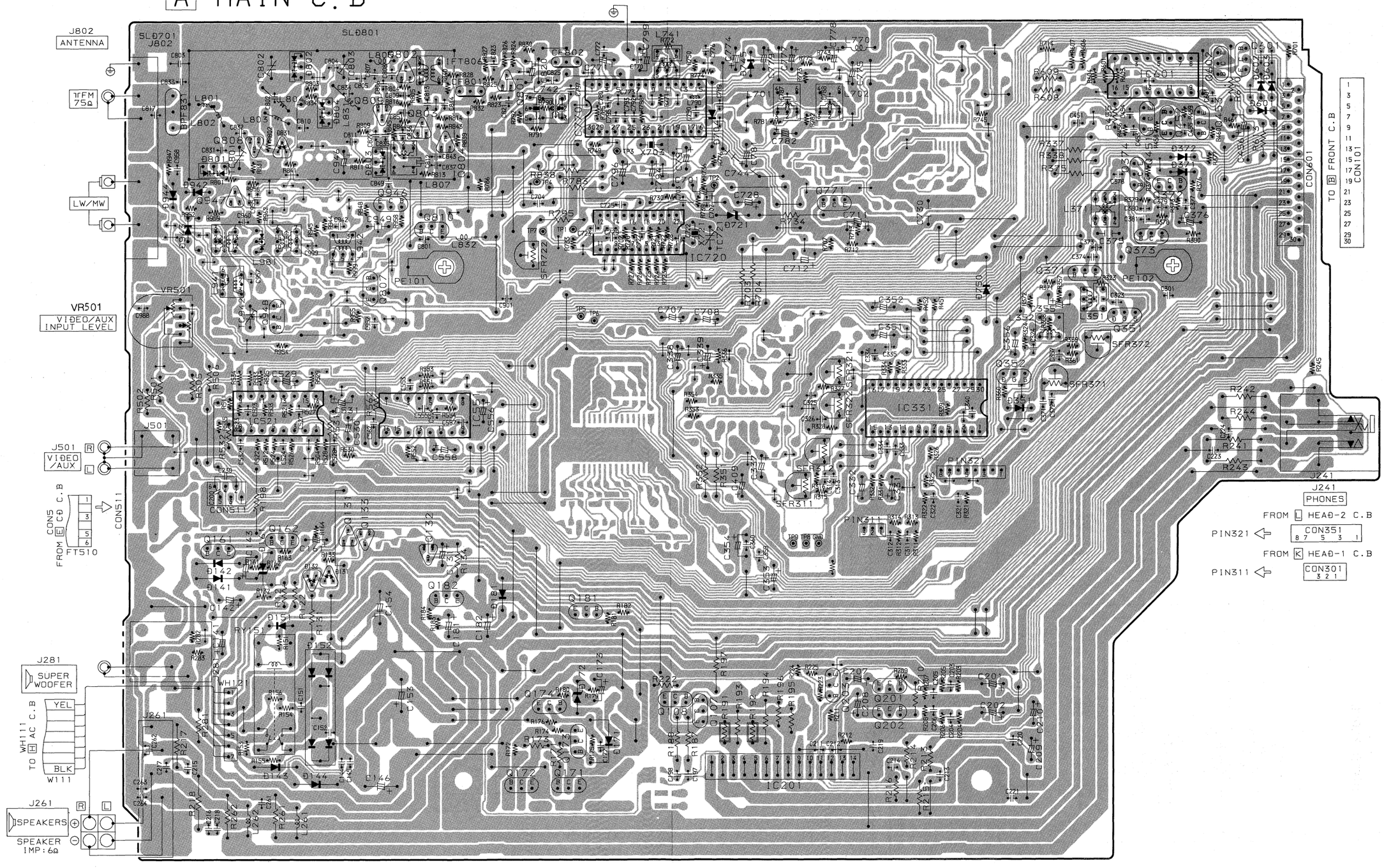


TRUTH TABLE

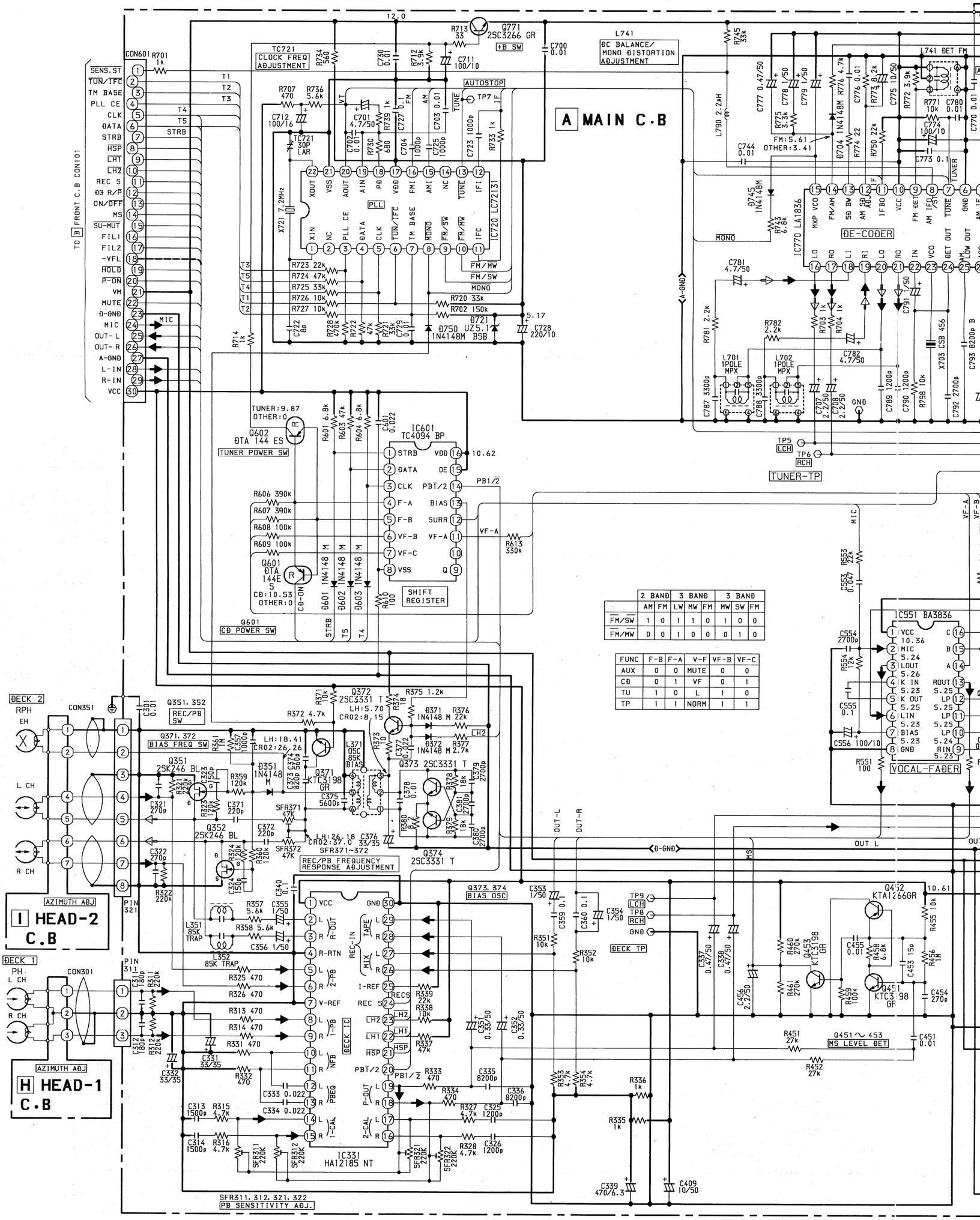
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

∞ :HIGH IMPEDACE
INPUT IS "H" ACITVE

A MAIN C.B

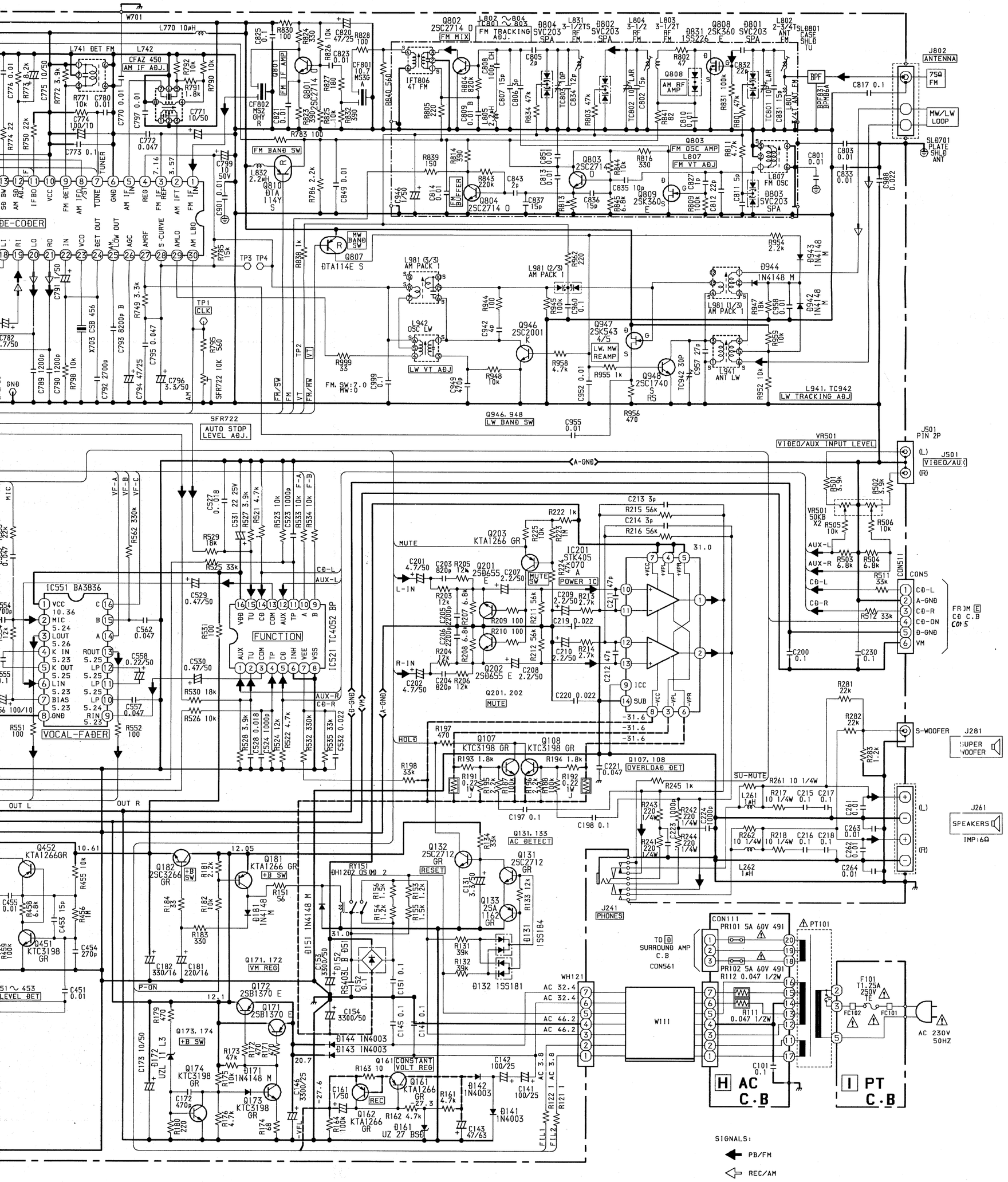

J802
ANTENNA
FM 75Ω
LW/MW
VR501
VIDEO/AUX INPUT LEVEL
J501
VIDEO /AUX
CON5 C.B
FROM E CD
FT510
CON511
J281
SUPER WOOFER
WH111
TO H AC C.B
YEL
BLK
W111
J261
SPEAKERS
SPEAKER IMP: 6Ω
TO B FRONT C.B
CON601
CON101
J241
PHONES
FROM L HEAD-2 C.B
CON351
PIN321
FROM K HEAD-1 C.B
CON301
PIN311
IC331
IC201
IC720
PE101
PE102
Q373
Q352
Q351
Q201
Q202
SFR311
SFR321
SFR322
SFR371
SFR372
SFR722

SCHEMATIC DIAGRAM – 1 (MAIN)



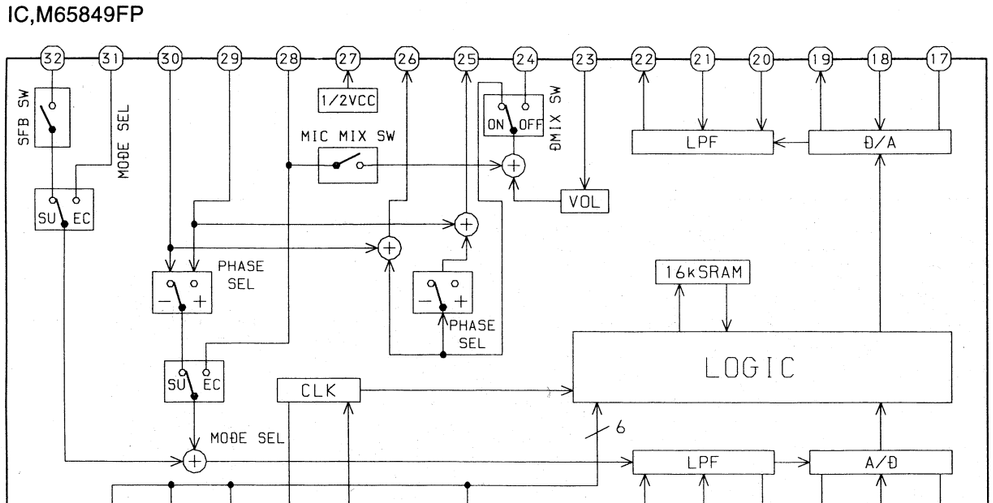
	2 BAND		3 BAND			3 BAND		
	AM	FM	LW	MW	FM	MW	SW	FM
FM/SW	1	0	1	1	0	1	0	0
FM/MW	0	0	1	0	0	0	1	0

FUNC	F-B	F-A	V-F	VF-B	VF-C
AUX	0	0	MUTE	0	0
CD	0	1	VF	0	1
TU	1	0	L	1	0
TP	1	1	NORM	1	1

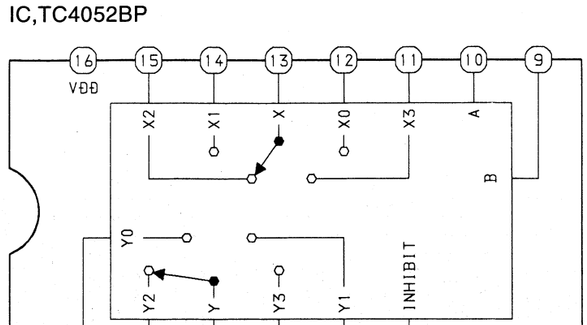

W701
L770 10µH
L741 DET FM
L742
CFAZ 450
AM IF ADJ.
Q802 2SC2714 O
FM MIX
L802 ~ L804
TC801 ~ TC803
FM TRACKING ADJ.
D804 SVC203 SPA
L831 3-1/2TS RF FM
D802 SVC203 SPA
L804 3-1/2 RF FM
L803 3-1/2T RF FM
D831 1SS226
Q808 2SK360 E
D801 SVC203 SPA
L802 2-3/4TS ANT FM
SLD801 CASE SHLD TU
J802 ANTENNA
75Ω FM
MW/LW LOOP
BPF
C817 0.1
SL0701 PLATE SHLD ANT
Q803 FM OSC AMP
L807 FM VT ADJ
L807 FM OSC
D803 SVC203 SPA
Q804 2SC2714 O
Q809 2SK360S F
Q810 DTA 114Y S
FM BAND SW
Q807 DTA114E S
MW BAND SW
L981 (3/3) AM PACK 1
L981 (2/3) AM PACK 1
L981 (1/3) AM PACK 1
D944 IN4148 M
D943 IN4148 M
D942 IN4148 M
L942 OSC LW
LW VT ADJ
Q946 2SC2001 K
Q947 2SK543 4/5
LW, MW REAMP
Q948 2SC1740 R/S
L941 ANT LW
L941, TC942 LW TRACKING ADJ
Q946, 948 LW BAND SW
SFR722 AUTO STOP LEVEL ADJ.
VR501 VIDEO/AUX INPUT LEVEL
J501 PIN 2P
J501 VIDEO/AUX
(L)
(R)
DE-CODER
TUNER
TP1 CLK
TP2 VT
TP3 TP4
FM/SW
FM
VT
FM/MW
FM, SW:7.0 MW:0
A-GND
IC551 BA3836
VOCAL-FADER
FUNCTION
IC521 TC4052 BP
MUTE
Q203 KTA1266 GR
Q201 2SD655 E
Q202 2SD655 E
MUTE SW
IC201 STK405 070 A
POWER IC
L-IN
R-IN
Q201, 202 MUTE
CON5
FROM E CD C.B CON5
CD-L
A-GND
CD-R
CD-GND
D-GND
VM
AUX-L
AUX-R
CON511
S-WOOFER
J281 SUPER WOOFER
SU-MUTE
J261 SPEAKERS IMP:6Ω
J241 PHONES
OUT L
OUT R
Q107 KTC3198 GR
Q108 KTC3198 GR
Q107, 108 OVERLOAD DET
HOLD
Q452 KTA1266GR
Q451 KTC3198 GR
Q182 2SC3266 GR
Q181 KTA1266 GR
Q131, 133 AC DETECT
Q132 2SC2712 GR
Q131 2SC2712 GR
Q133 2SA 1162 GR
RY151 DHI202 OS(M) 2
RESET
D151 1N4148 M
D152 DS1
RS403L
D131 1SS184
D132 1SS181
Q171, 172 VM REG
Q172 2SB1370 E
Q171 2SB1370 E
Q173, 174 +B SW
Q174 KTC3198 GR
Q161 KTA1266 GR
CONSTANT VOLT REG
REC
Q162 KTA1266 GR
D161 UZ 27 BSD
D171 1N4148 M
D172 UZL 11 L3
D143 1N4003
D144 1N4003
D141 1N4003
D142 1N4003
P-ON
TO D SURROUND AMP C.B CON561
CON111
PR101 5A 60V 491
PR102 5A 60V 491
PT101
F101 T1.25A 250V TE
FC101
FC102
AC 230V 50HZ
W111
WH121
H AC C.B
I PT C.B
SIGNALS:
PB/FM
REC/AM

IC BLOCK DIAGRAM – 2

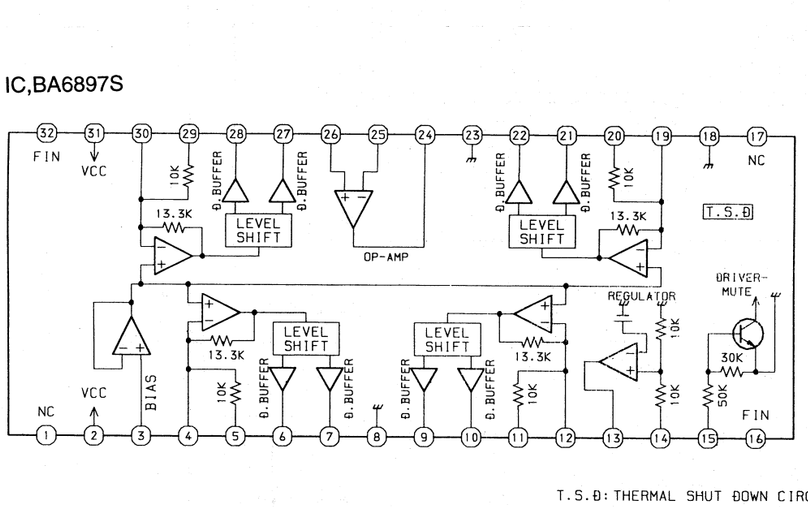
IC,M65849FP



IC,TC4052BP

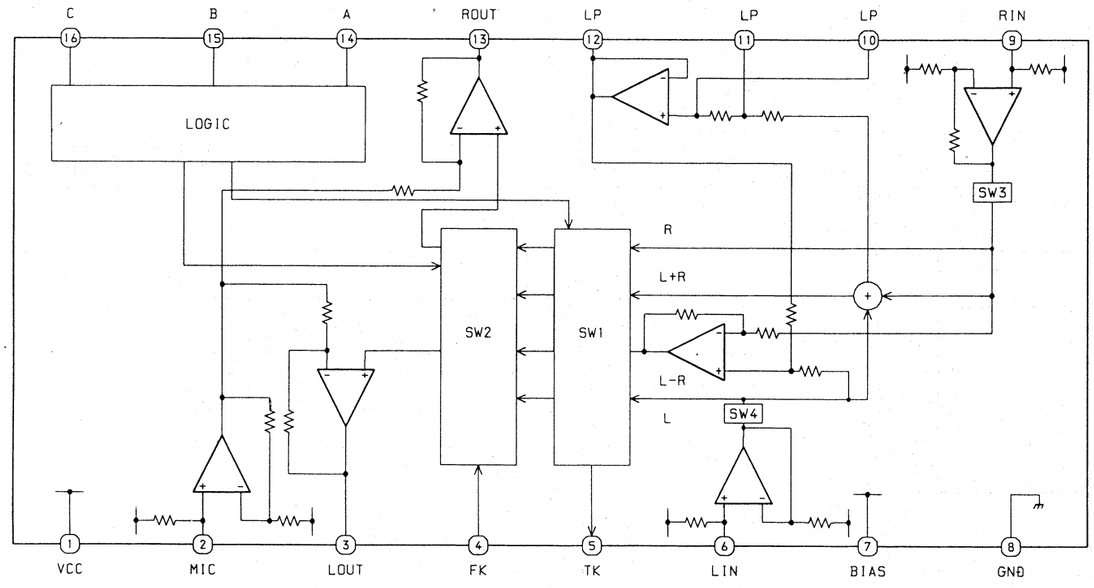


IC,BA6897S

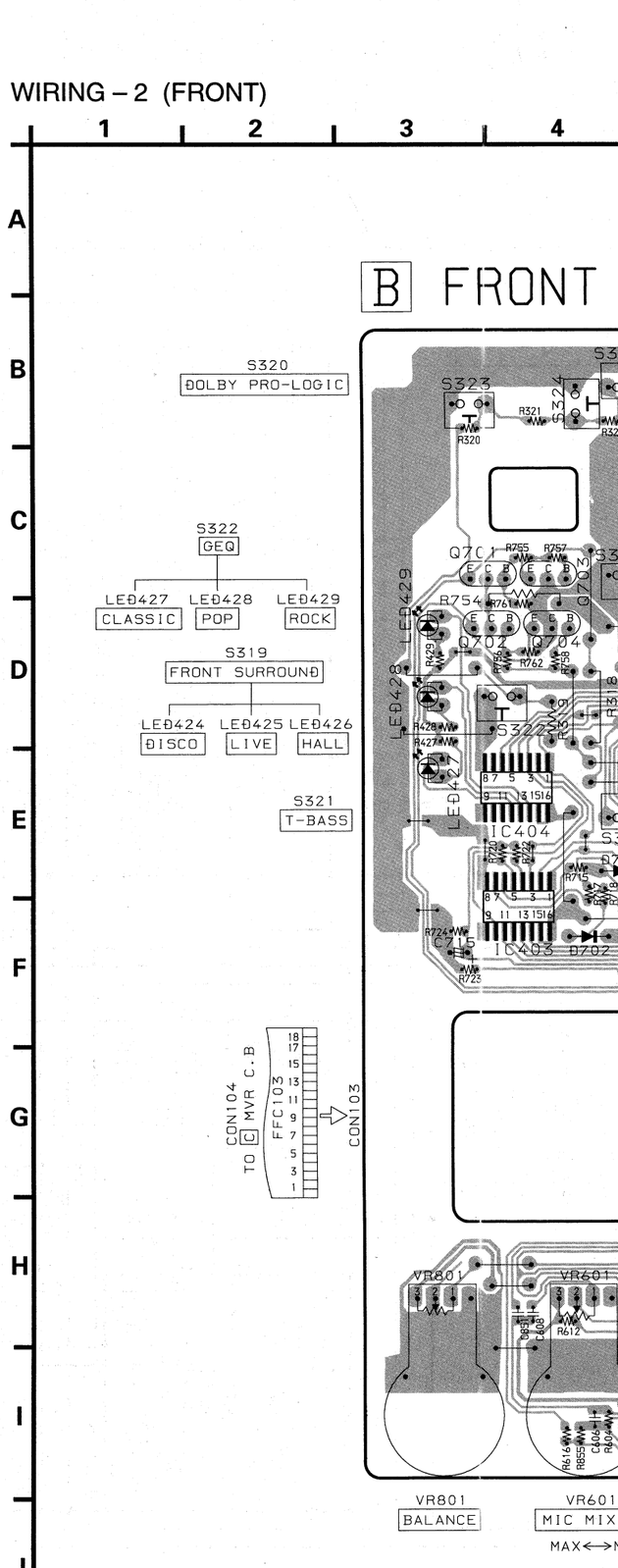


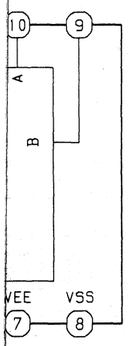
T.S.D: THERMAL SHUT DOWN CIRCUIT
D.BUFFER: DRIVE BUFFER

IC,BA3836



WIRING – 2 (FRONT)

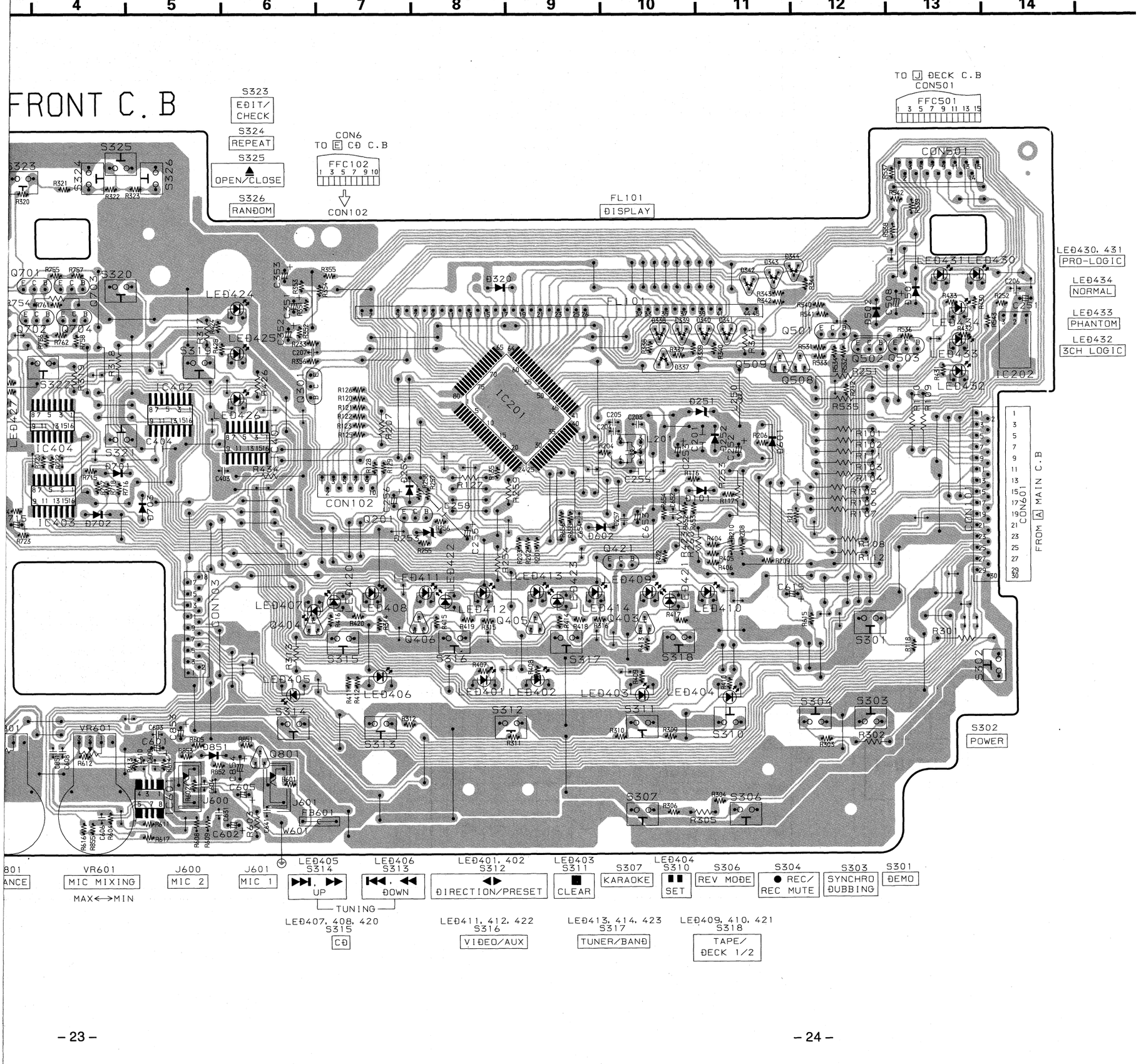




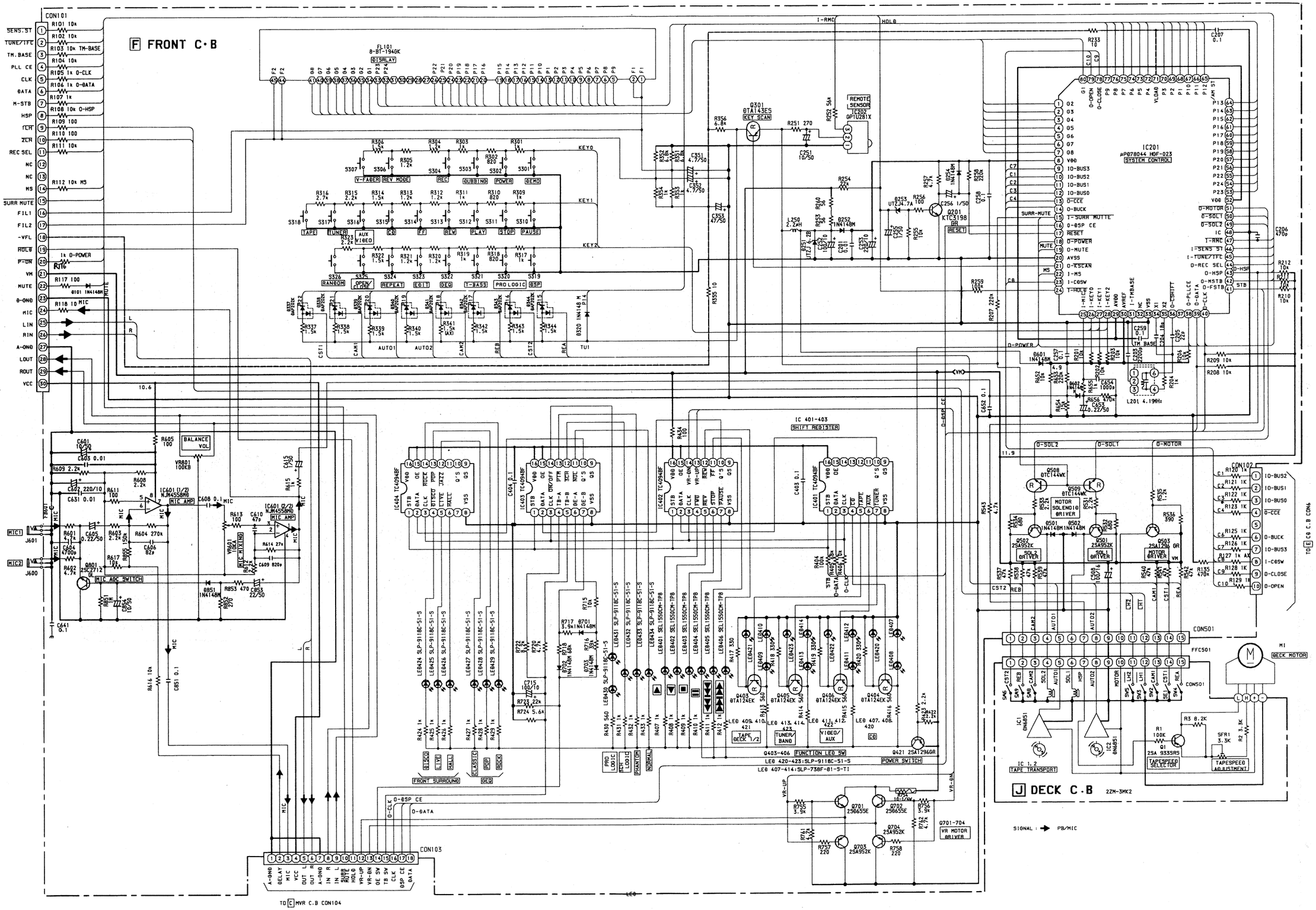
TRUTH TABLE

CONTROL INPUTS			ON SWITCH	
INHIBIT	B	A		
L	L	L	Y0	X0
L	L	H	Y1	X1
L	H	L	Y2	X2
L	H	H	Y3	X3
H	X	X	—	—

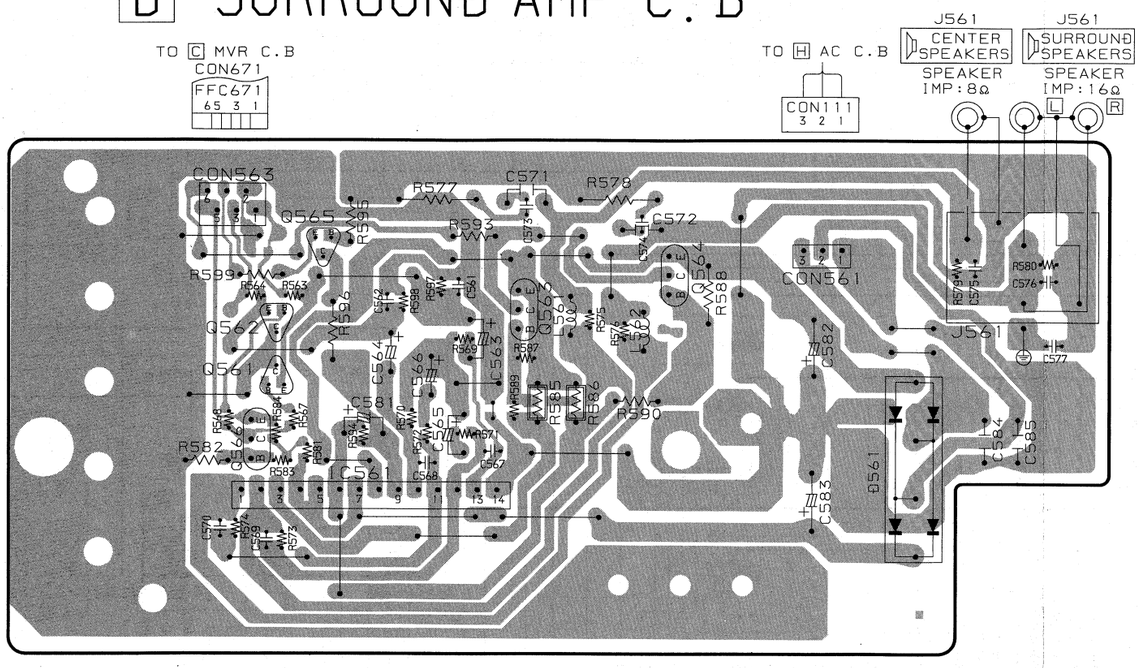
L:LOW LEVEL
H:HIGH LEVEL
H:IRRELEVANT



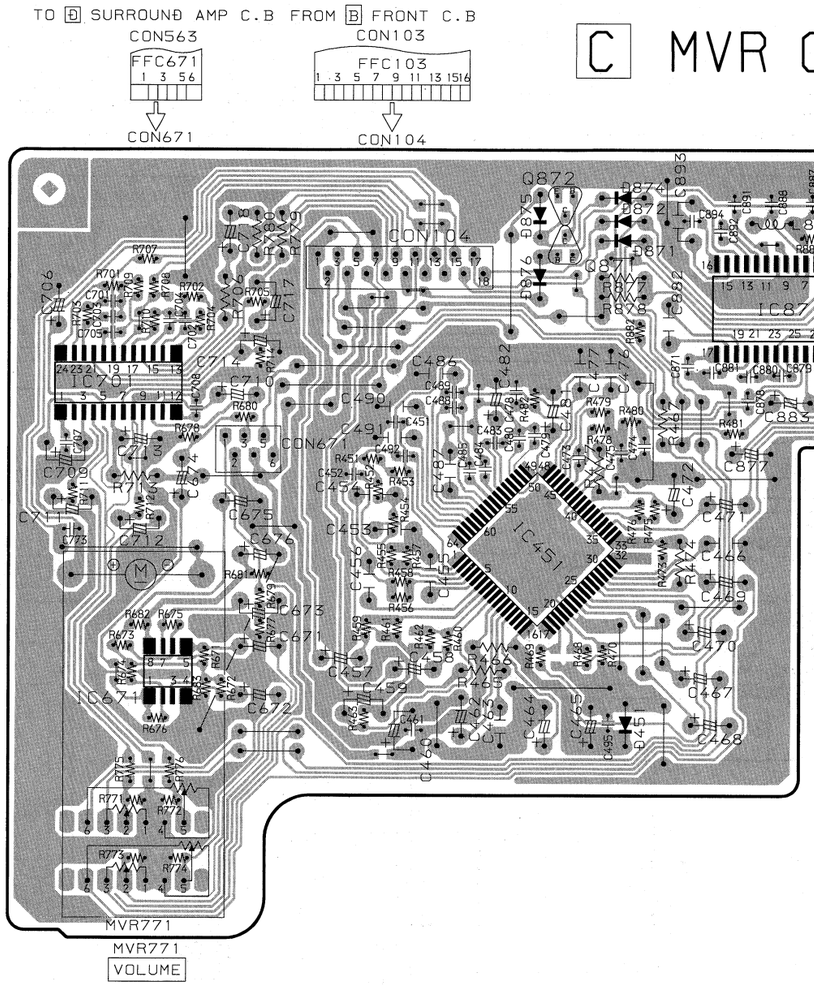
SCHEMATIC DIAGRAM – 2 (FRONT)



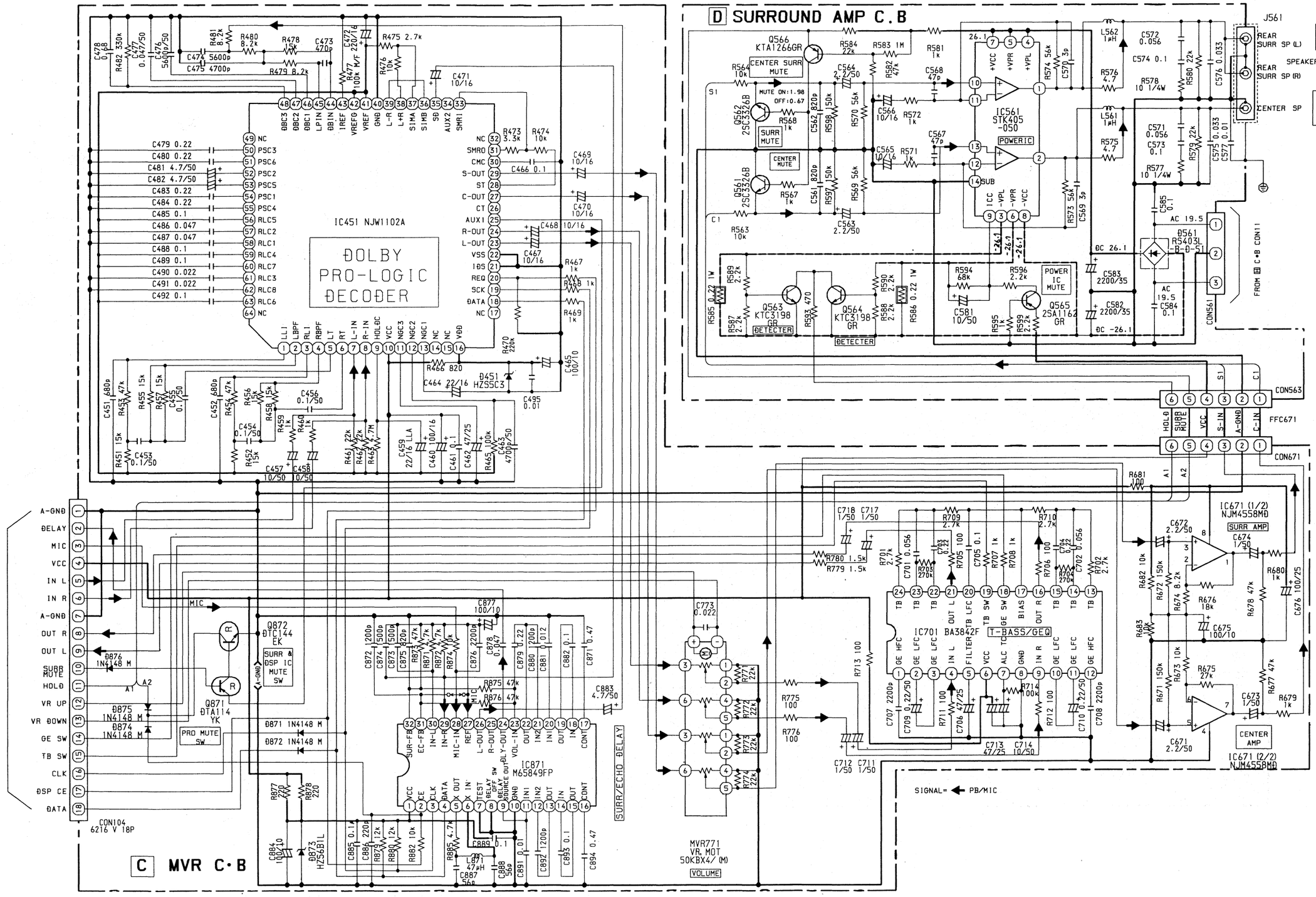
Ð SURROUNÐ AMP C.B



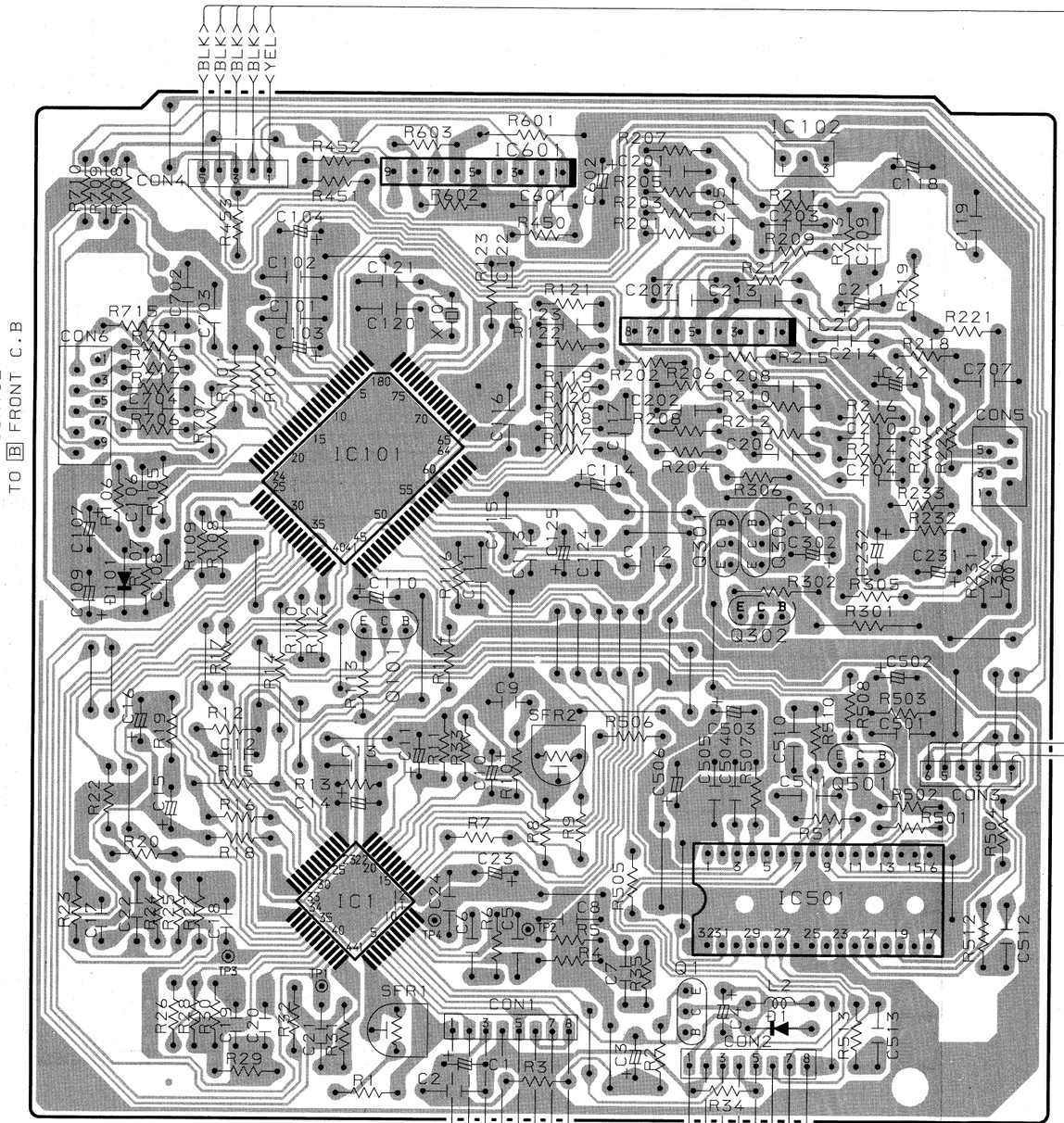
C MVR C.B

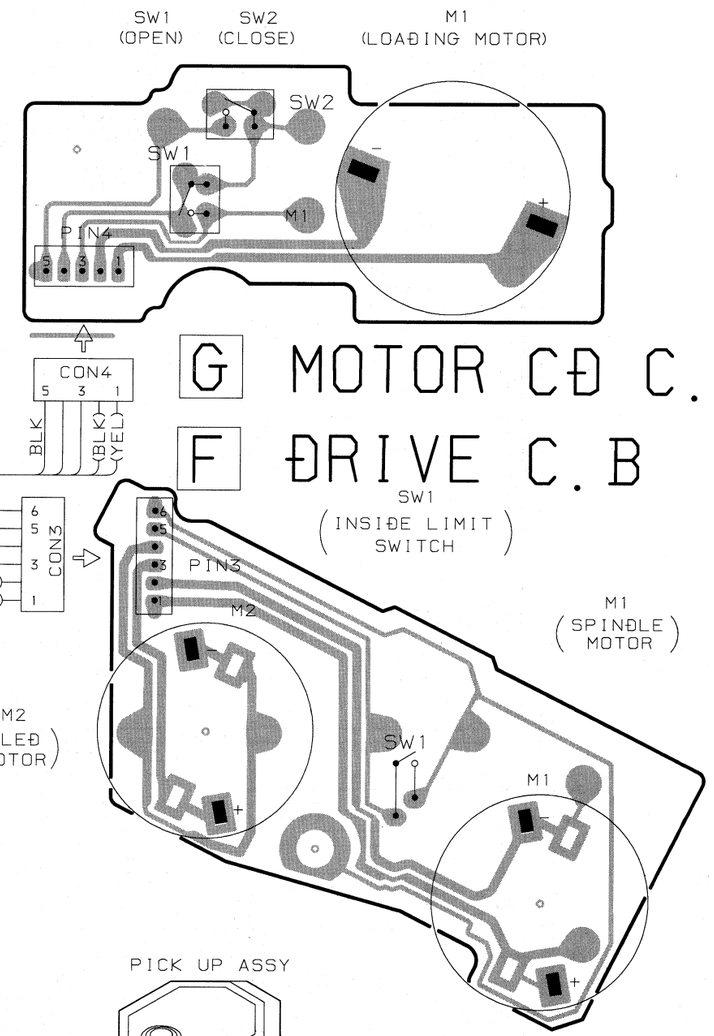


SCHEMATIC DIAGRAM – 3 (MVR/SURROUNDAMP)



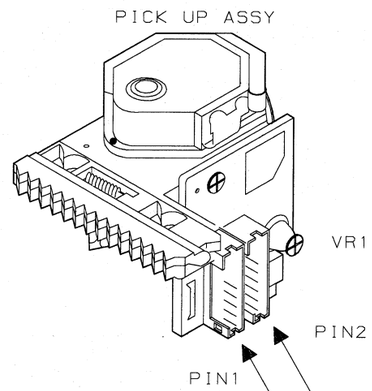
E CD C.B





G MOTOR CD C.B

F DRIVE C.B



E CD C.B

IC101 TC9284BF
DIGITAL SIGNAL PROCESSOR

IC1 TA8191F
RF SIGNAL SERVO PROCESSOR

IC102 GP1F32T
CD DIGITAL OUT (OPTICAL)

TRAY MOTOR DRIVER
IC601 TA7291S

[IC501] BA6897S
TRACKING FOCUS SLED SPINDAL

Q101 DTA144TS
SEARCH GAIN SW

Q301, 302, 304
+8V REG/SWITCH

Q501 2SA1318TU
+5V REG

Q303 2SA933AS
LD DRIVER

[IC201 (2/2)] NJM4558L
[IC201 (1/2)] NJM4558L
IC201 EQUALIZER AMP

CON1 WHITE
CON2 RED
CON3
CON4
CON5 FT510
CON6 FT402

PIN1 PICK UP ASSY KSS-212A
PIN2 CDE MECHANISM 3ZG_3A3N
PIN3 F DRIVE C.B
PIN4 G MOTOR CD C.B

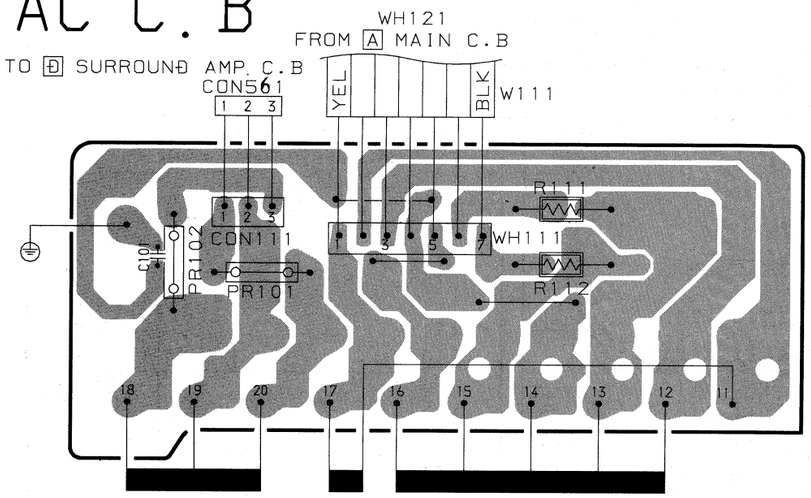
TO [R] FRONT C.B CON102
TO [K] MAIN C.B CON511

A	LIMIT SW	OPEN SW	CLOSE SW
5.3	OFF	OFF	OFF
4.3	ON	OFF	OFF
3.4	OFF	OFF	ON
2.5	OFF	ON	OFF
1.4	ON	OFF	ON
0	ON	ON	OFF

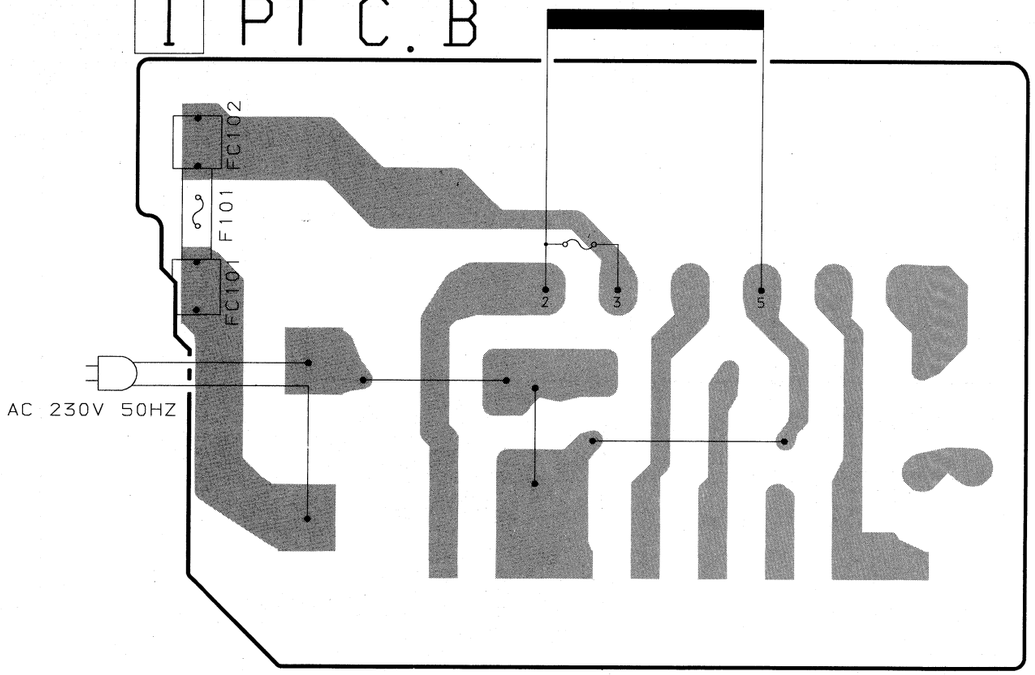
※	Q301	Q302	R301	R302
ALL EXCEPT LH, HE, HR	2SA952K	2SA952K	4.7 1/4W	4.7 1/4W
ONLY LH, HE, HR	2SB1370E	–	2.2 1/4W	–

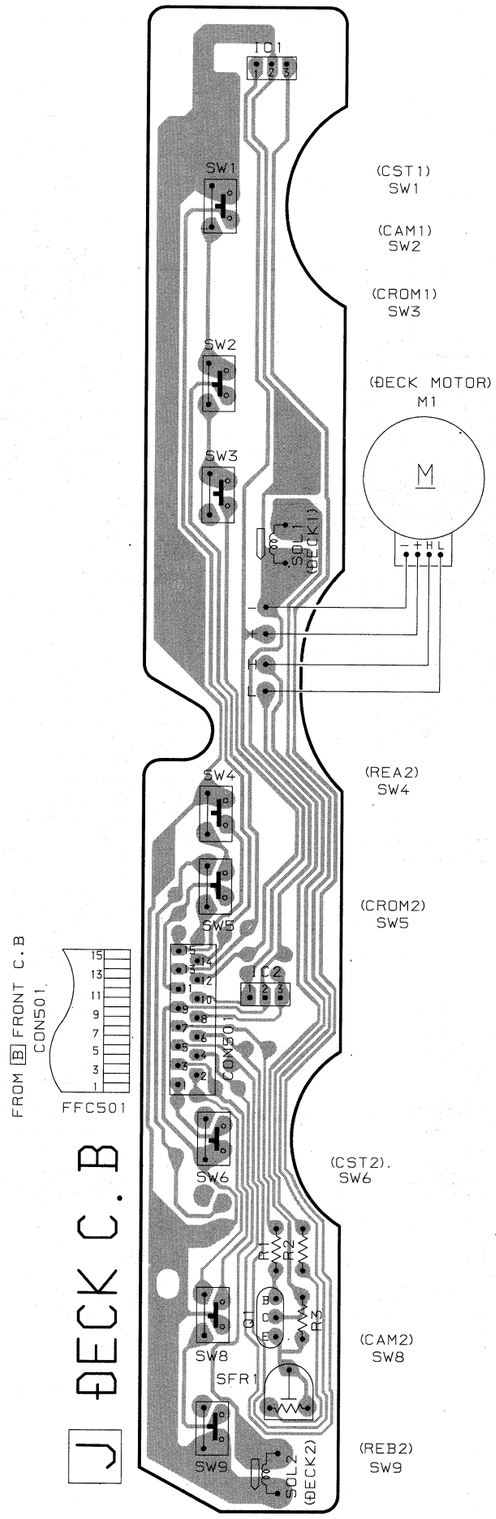
SIGNAL ← AUDIO

H AC C.B

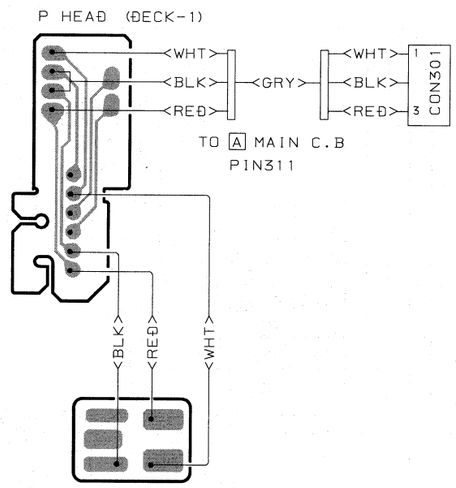


I PT C.B

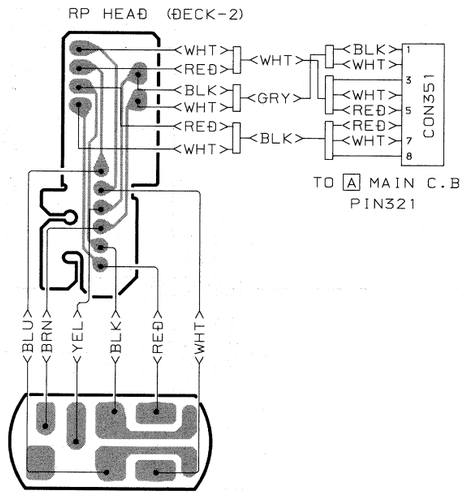




K HEAĐ-1 C.B

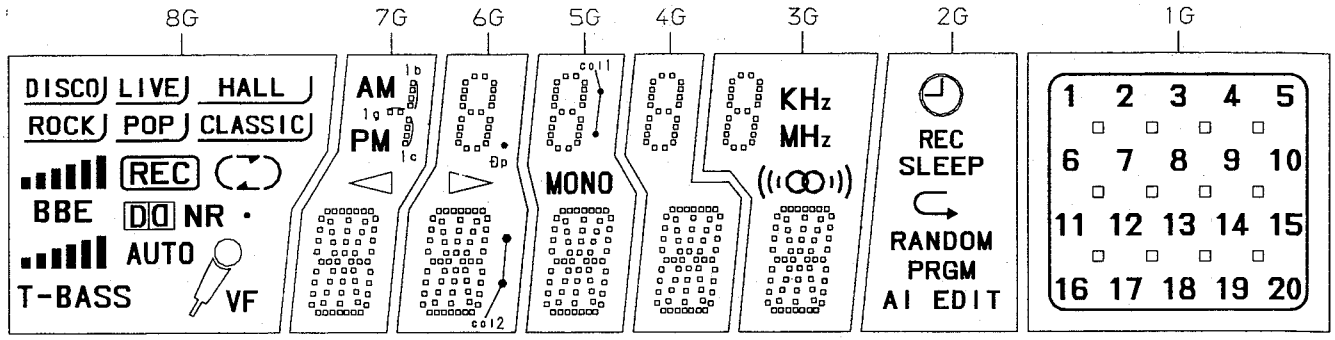


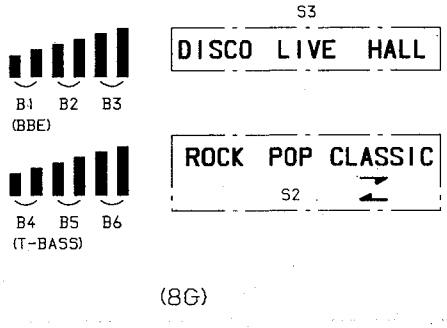
L HEAĐ-2 C.B



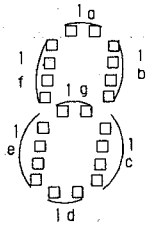
FL GRID ASSIGNMENT & ANODE CONNECTION

FL,8-BT-194GK
GRID ASSIGNMENT

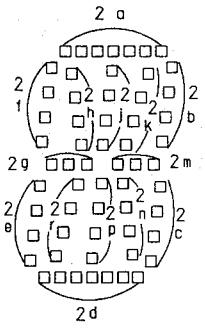




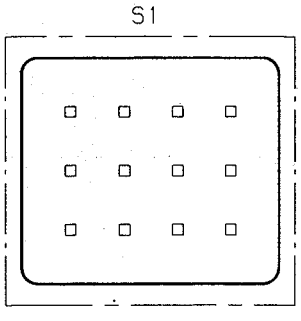
(8G)



(6G ~ 3G)



(7G ~ 3G)



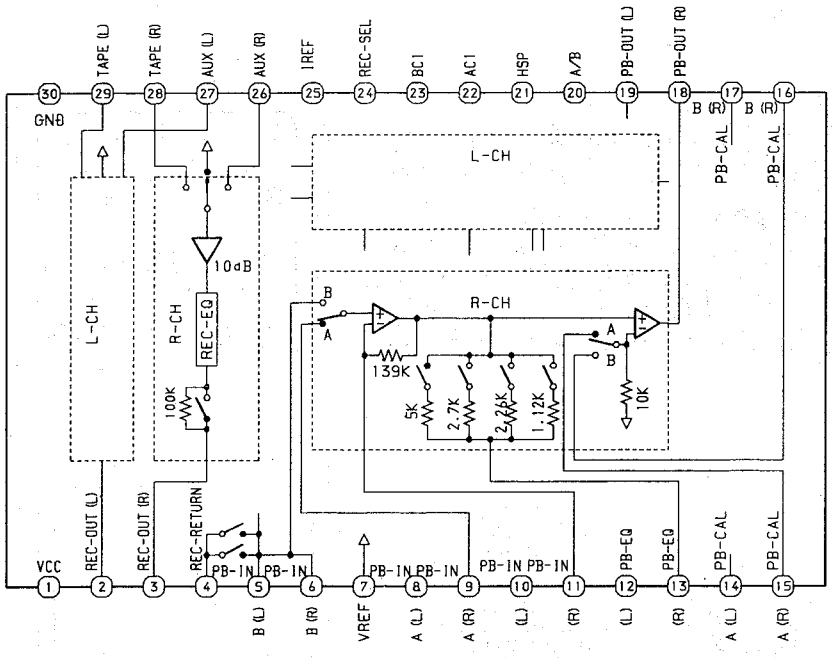
(1G)

ANODE CONNECTION

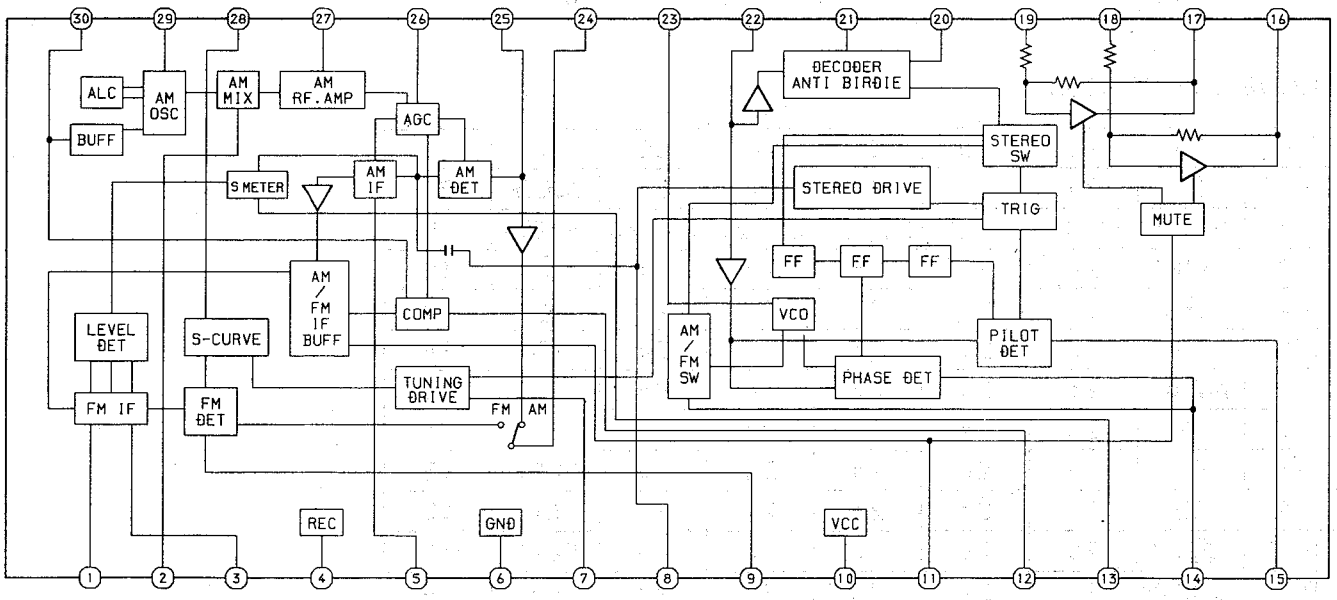
	8G	7G	6G	5G	4G	3G	2G	1G
P1	☾	2d	2d	2d	2d	2d	**SLEEP**	**20**
P2	**T-BASS**	2j, 2p	2j, 2p	2j, 2p	2j, 2p	2j, 2p	**RANDOM**	**19**
P3	**BBE**	2n	2n	2n	2n	2n	⮌	**18**
P4	VF	2r	2r	2r	2r	2r	◴	**17**
P5	☽	2c	2c	2c	2c	2c	**REC**	**16**
P6	**AUTO**	2e	2e	2e	2e	2e	—	**15**
P7	○	2m	2m	2m	2m	2m	—	**14**
P8	B2	2g	2g	2g	2g	2g	**PRGM**	**13**
P9	B3	2f	2f	2f	2f	2f	**AI**	**12**
P10	**NR**	2b	2b	2b	2b	2b	**EDIT**	**11**
P11	(DISCO)	2k	2k	2k	2k	2k	—	**10**
P12	(LIVE)	2h	2h	2h	2h	2h	—	**9**
P13	(HALL)	2a	2a	2a	2a	2a	—	**8**
P14	(ROCK)	—	col2	col1[上]	—	**KHz**	—	**7**
P15	(POP)	—	▷	**MONO**	—	**MHz**	—	**6**
P16	(CLASSIC)	—	Dp	col1[下]	—	—	—	**5**
P17	**REC**	◁	1d	1d	1d	1d	—	**4**
P18	B1	—	1e	1e	1e	1e	—	**3**
P19	B2	**AM**	1c	1c	1c	1c	—	**2**
P20	B3	1g	1g	1g	1g	1g	—	**1**
P21	B4	1b, 1c	1f	1f	1f	1f	—	S1
P22	B5	—	1b	1b	1b	1b	—	—
P23	B6	**PM**	1a	1a	1a	1a	—	—
P24	—	—	—	—	—	—	—	—

IC BLOCK DIAGRAM – 3

IC,HA12185NT



IC,LA1836



IC DESCRIPTION

IC, TC9284BF

Pin No.	Pin Name	I/O	Description
1	GNDA	-	Analog GND terminal .
2	RO	O	R-channel in-phase output .
3	$\overline{RO}$	O	R-channel out of phase output .
4	VDDA	-	D/A convertor supply terminal .
5	$\overline{LO}$	O	L-channel in-phase output .
6	LO	O	L-channel out of phase output .
7	GNDA	-	D/A convertor ground terminal .
8	$\overline{TEST3}$	I	Test terminal .
9	$\overline{TEST4}$	I	Test terminal .
10	$\overline{TEST5}$	I	Test terminal .
11	SBOK	O	Subcode Q data CRC check data output terminal . OK when "H". (Not used)
12	VDDD	-	Digital supply terminal .
13	GNDD	-	Digital ground terminal .
14	BUS0	I/O	Command and data send / receive I / O terminal .
15	BUS1		
16	BUS2		
17	BUS3		
18	$\overline{CCE}$	I	Chip enable signal input terminal for command and data send / receive . Bus line active when "L" .
19	BUCK	I	Command and data send / receive clock input terminal .
20	PFCK	O	Playback data read clock output terminal . (Not used)
21	$\overline{RST}$	I	Reset input terminal . Internal system reset when "L" .
22	SUBSYC	O	Subcode synchronisation terminal . (Not used)
23	SUBD	O	Subcode P-W output terminal . (Not used)
24	CLCK	I	Subcode P-W data read-out clock input terminal .
25	VDDD	-	Digital supply terminal .
26	GNDD	-	Digital ground terminal .
27	DFCT	O	Defect detection signal output terminal . VREF when a defect signal is detected: Normally HiZ . (Not used.)
28	TEL2	O	Tracking gain adjustment analog switch output terminal .VREF or HiZ .
29	TEL1		
30	TGUL	O	Analog switch output terminal for switching the low range phase compensator of the tracking servo loop . HiZ (gain up) when shock signal is detected; VREF when gain up .
31	TGUH2	O	Analog switch output terminal for swithching the middle and high range phase compensator of the tracking servo loop. HiZ (gain up) when shock signal is detected; nomally VREF.TGUH1 is used when playing back in normal mode; TGUH2 when playing back in high speed mode. (TGUH2 is not used.)
32	TGUH1		
33	TKIC	O	Tracking actuator kick signal output terminal . Kicked to an external cylinder when "H"; an internal cylinder when "L" .

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>34</td><td>FMON</td><td>O</td><td>Feed servo ON/OFF analog switch output terminal . (Pin 35 is not used)
<table><tr><td>Feed servo</td><td>ON</td><td>OFF</td></tr><tr><td>FMON</td><td>HiZ</td><td>VREF</td></tr></table></td></tr>
<tr><td>35</td><td>$\overline{\text{TEST1}}$</td><td>I</td><td>Test terminal .</td></tr>
<tr><td>36</td><td>FMFB</td><td>O</td><td>Feed motor FWD/BWD operation control signal output terminal .
Feed to an external cylinder when "H"; feeds to an internal cylinder when "L" .</td></tr>
<tr><td>37</td><td>$\overline{\text{TEST}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>38</td><td>DMON</td><td>O</td><td>Analog switch output terminal for switching the gain of the disk motor drive circuit .</td></tr>
<tr><td>39</td><td>DMFC</td><td>O</td><td>Disk motor CLV servo AFC signal output terminal .
<table><tr><td>Command</td><td>DMFC output</td><td>Operation</td></tr><tr><td>DMFK</td><td>H</td><td>Motor accelerated</td></tr><tr><td>DMSV</td><td>PWM</td><td>CLV servo ON</td></tr><tr><td>DMBK</td><td>L</td><td>Motor decelerated</td></tr><tr><td>DMOFF</td><td>VREF</td><td>CLV servo OFF</td></tr></table></td></tr>
<tr><td>40</td><td>DMPC</td><td>O</td><td>Disk motor CLV servo APC signal output terminal .</td></tr>
<tr><td>41</td><td>2VREF</td><td>I</td><td>Two times reference voltage input terminal . (VREF x 2)</td></tr>
<tr><td>42</td><td>SEL</td><td>O</td><td>Servo mode indication signal output terminal .
<table><tr><td>SEL</td><td>LD ON/OFF</td><td>Focus servo</td><td>Operation mode</td></tr><tr><td>L</td><td>OFF</td><td>OFF</td><td>LD OFF</td></tr><tr><td>HiZ</td><td>ON</td><td>OFF</td><td>Focus search</td></tr><tr><td>H</td><td>ON</td><td>ON</td><td>Normal play etc.,
(Focus servo ON:FOK)</td></tr></table></td></tr>
<tr><td>43</td><td>FCSI</td><td>O</td><td>Focus actuator drive signal output terminal in focus search mode .
<table><tr><td>Command</td><td>FKIC output</td><td>Operation</td></tr><tr><td>FGASR</td><td>H</td><td>Lens distant from disk</td></tr><tr><td>FGSS</td><td>L</td><td>Lens near disk</td></tr><tr><td>Others</td><td>HiZ</td><td>Other than focus search</td></tr></table></td></tr>
<tr><td>44</td><td>FKIC</td><td>O</td><td>Focus actuator drive signal output terminal in focus gain adjustment mode . (Not used.)
<table><tr><td>Command</td><td>FKIC output</td><td>Operation</td></tr><tr><td>FGASR</td><td>H</td><td>Lens distant from disk</td></tr><tr><td>FGSS</td><td>L</td><td>Lens near disl</td></tr><tr><td>Other</td><td>HiZ</td><td>Other than focus gain adjustment</td></tr></table></td></tr>
<tr><td>45</td><td>FEL2</td><td rowspan="2">O</td><td rowspan="2">Focus gain adjustment analog switch output terminal. (Not used.)</td></tr>
<tr><td>46</td><td>FEL1</td></tr>
<tr><td>47</td><td>FEI</td><td>I</td><td>Focus error signal input terminal .</td></tr>
<tr><td>48</td><td>TESH</td><td>I</td><td>Analog switch input terminal for sample-holding of the tracking error signal .</td></tr>
<tr><td>49</td><td>TEOF</td><td>O</td><td>Analog switch input terminal for tracking servo ON/OFF .
VREF when tracking servo is OFF .</td></tr>
<tr><td>50</td><td>SBAD</td><td>I</td><td>Sub-beam add signal input terminal .</td></tr>
<tr><td>51</td><td>RFRP</td><td>I</td><td>RF ripple signal input terminal .</td></tr>
</table>

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>52</td><td>VREF</td><td>I</td><td>Reference voltage input terminal . (+2.2V)</td></tr>
<tr><td>53</td><td>RFI</td><td>I</td><td>RF signal input terminal .</td></tr>
<tr><td>54</td><td>GNDA</td><td>-</td><td>Analog ground terminal .</td></tr>
<tr><td>55</td><td>DTSC2</td><td>O</td><td>EFM signal negative-phase output terminal for data slice control .</td></tr>
<tr><td>56</td><td>MONIT</td><td>O</td><td>Control terminal . (Not used.)</td></tr>
<tr><td>57</td><td>DTSC1</td><td>O</td><td>EFM signal positive-phase output terminal for data slice control .</td></tr>
<tr><td>58</td><td>VDDA</td><td>-</td><td>Analog power voltage terminal . (+5V)</td></tr>
<tr><td>59</td><td>PDCNT</td><td>I</td><td>PDO output control terminal . PDO output is involuntarily set to HiZ when "L" .</td></tr>
<tr><td>60</td><td>PDO</td><td>O</td><td>Output terminal for phase difference signal between EFM and PLCK signals .</td></tr>
<tr><td>61</td><td>TMAX</td><td>O</td><td>TMAX signal output terminal . HiZ in system lock .
<table><tr><th>TMAX cycle</th><th>TMAX output</th></tr><tr><td>Longer than specified cycle</td><td>L</td></tr><tr><td>Shorter than specified cycle</td><td>H(2VREF)</td></tr><tr><td>Specified cycle</td><td>HiZ</td></tr></table></td></tr>
<tr><td>62</td><td>LPFN</td><td>I</td><td>LPF amplifier negative-phase input terminal for PLL .</td></tr>
<tr><td>63</td><td>LPFO</td><td>O</td><td>LPF amplifier output terminal for PLL .</td></tr>
<tr><td>64</td><td>VCOF</td><td>I</td><td>VCO filter terminal .</td></tr>
<tr><td>65</td><td>TEXTX</td><td>I</td><td>Test terminal .</td></tr>
<tr><td>66</td><td>$\overline{HS}$</td><td>O</td><td>High- speed monitor output terminal . High-speed mode when "L" . (Not used.)</td></tr>
<tr><td>67</td><td>GNDD</td><td>O</td><td>Digital ground terminal .</td></tr>
<tr><td>68</td><td>SPDA</td><td>O</td><td>Processor status signal output terminal .
Correction / discrimination data, memory buffer capacity, etc. (Not used.)</td></tr>
<tr><td>69</td><td>COFS</td><td>O</td><td>Correction system frame frequency signal output terminal. 7.35kHz (Not used.)</td></tr>
<tr><td>70</td><td>WDCK</td><td>O</td><td>Word clock output terminal . Normally 88.2kHz . (Not used.)</td></tr>
<tr><td>71</td><td>CHCK</td><td>O</td><td>Channel clock output terminal . Normally 44.1kHz . (Not used.)</td></tr>
<tr><td>72</td><td>BCK</td><td>O</td><td>Bit clock output terminal . Normally 1.4112MHz . (Not used.)</td></tr>
<tr><td>73</td><td>AOUT</td><td>O</td><td>Audio data output terminal . (Not used.)</td></tr>
<tr><td>74</td><td>EMPH</td><td>O</td><td>Emphasis ON/OFF indication signal output terminal . emphasis on when "H" .</td></tr>
<tr><td>75</td><td>DOUT</td><td>O</td><td>Digital OUT output terminal . (Not used.)</td></tr>
<tr><td>76</td><td>TEST2</td><td>I</td><td>Test terminal .</td></tr>
<tr><td>77</td><td>VDDX</td><td>-</td><td>Crystal supply terminal .</td></tr>
<tr><td>78</td><td>X1</td><td>I</td><td rowspan="2">Crystal oscillator connection terminal .</td></tr>
<tr><td>79</td><td>X0</td><td>O</td></tr>
<tr><td>80</td><td>GNDX</td><td>-</td><td>Crystal ground terminal .</td></tr>
</table>

IC, TA8191F

Pin No.	Pin Name	I/O	Description
1	TPO	O	Sub-beam I-V amplifier (TP AMP) output terminal .
2	TPI	I	Sub-beam I-V amplifier (TP AMP) input terminal .
3	TNI	I	Sub-beam I-V amplifier (TP AMP) input terminal .
4	FNI	I	Main-beam I-V amplifier (FN AMP) input terminal .
5	FPI	I	Main-beam I-V amplifier (FP AMP) input terminal .
6	LDO	O	Laser diode amplifier (LD AMP) output terminal .
7	MDI	I	Monitor photo diode amplifier (MD AMP) input terminal .
8	RFN	I	RF amplifier (RF AMP) negative-phase input terminal .
9	RFO	O	RF amplifier (RF AMP) output terminal .
10	RFI	I	RF ripple signal forming circuit input terminal .
11	VREF	O	Reference voltage output terminal . (+2.1V)
12	VFRP	O	RF ripple signal output terminal .
13	SBAD	O	Scratch detection signal output terminal .
14	FEB	I	Focus error balance adjustment input terminal .
15	FEO	O	Focus error amplifier (FE AMP) output terminal .
16	SEL	I	Analog switch control signal input terminal .
17	VEE	-	Power terminal . (GND)
18	FSN	I	Focus output amplifier (FS AMP) negative-phase input terminal .
19	FSO	O	Focus output amplifier (FS AMP) output terminal .
20	COSC	O	Capacitor connection terminal for focus search signal generation .
21	OSCI	I	Built-in power supply control input terminal for focus search signal generation .
22	GND	-	GND
23	VCC	I	Power supply terminal . (+5V)
24	DMEP	I	Disk motor apmlifier (DM AMP) positive-phase input terminal .
25	DMEN	I	Disk motor amplifier (DM AMP) negative-phase input terminal .
26	DMEO	O	Disk motor amplifier (DM AMP) output terminal .
27	DMPO	O	Disk motor drive amplifier (DM AMP) output terminal . (Not used.)
28	PVR	I	Drive amplifier reference voltage input terminal .
29	FMPO	O	Feed motor drive amplifier (FMP AMP) output terminal . (Not used)
30	FMEO	O	Feed motor drive amplifier (FM AMP) output terminal .
31	FMEN	I	Feed motor amplifier (FM AMP) negative-phase input terminal .
32	FMEP	I	Feed motor amplifier (FM AMP) positive-phase input terminal .
33	FAPO	O	Focus actuator drive amplifier (FAP AMP) output terminal . (Not used)
34	2VRO	O	2VREF amplifier (2VREF AMP) output terminal .
35	2VRP	I	2VREF amplifier (2VREF AMP) positive-phase input terminal .
36	2VRN	I	2VREF amplifier (2VREF AMP) negative-phase input terminal .
37	TS2O	O	Tracking servo amplifier 2 (TS2 AMP) output terminal .
38	TS2N	I	Tracking servo amplifier 2 (TS2 AMP) negative-phase input terminal .
39	TS2P	I	Tracking servo amplifier 2 (TS2 AMP) positive-phase input terminal .
40	TS1O	O	Tracking servo amplifier 1 (TS1 AMP) output terminal .

Pin No.	Pin Name	I/O	Description
41	TS1N	I	Tracking servo amplifier 1 (TS1 AMP) negative-phase input terminal .
42	TS1P	I	Tracking servo amplifier 1 (TS1 AMP) positive-phase input terminal .
43	TSO	O	Tracking output amplifier (TS AMP) output terminal .
44	TSN	I	Tracking output amplifier (TS AMP) negative-phase input terminal .

IC, LC72131D

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>XIN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (7.2MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>XOUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Digital data input from CPU when relevant key is operated.
Active "H".</td></tr>
<tr><td>5</td><td>CLK</td><td>I</td><td>To clock in the data DI.</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Digital data output to CPU.</td></tr>
<tr><td>7</td><td>TM-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when MONO / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / AM</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IFIN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>15</td><td>A MIN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>F MIN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>AIN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>AOUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>

IC, μPD78044HGF-023-3B9

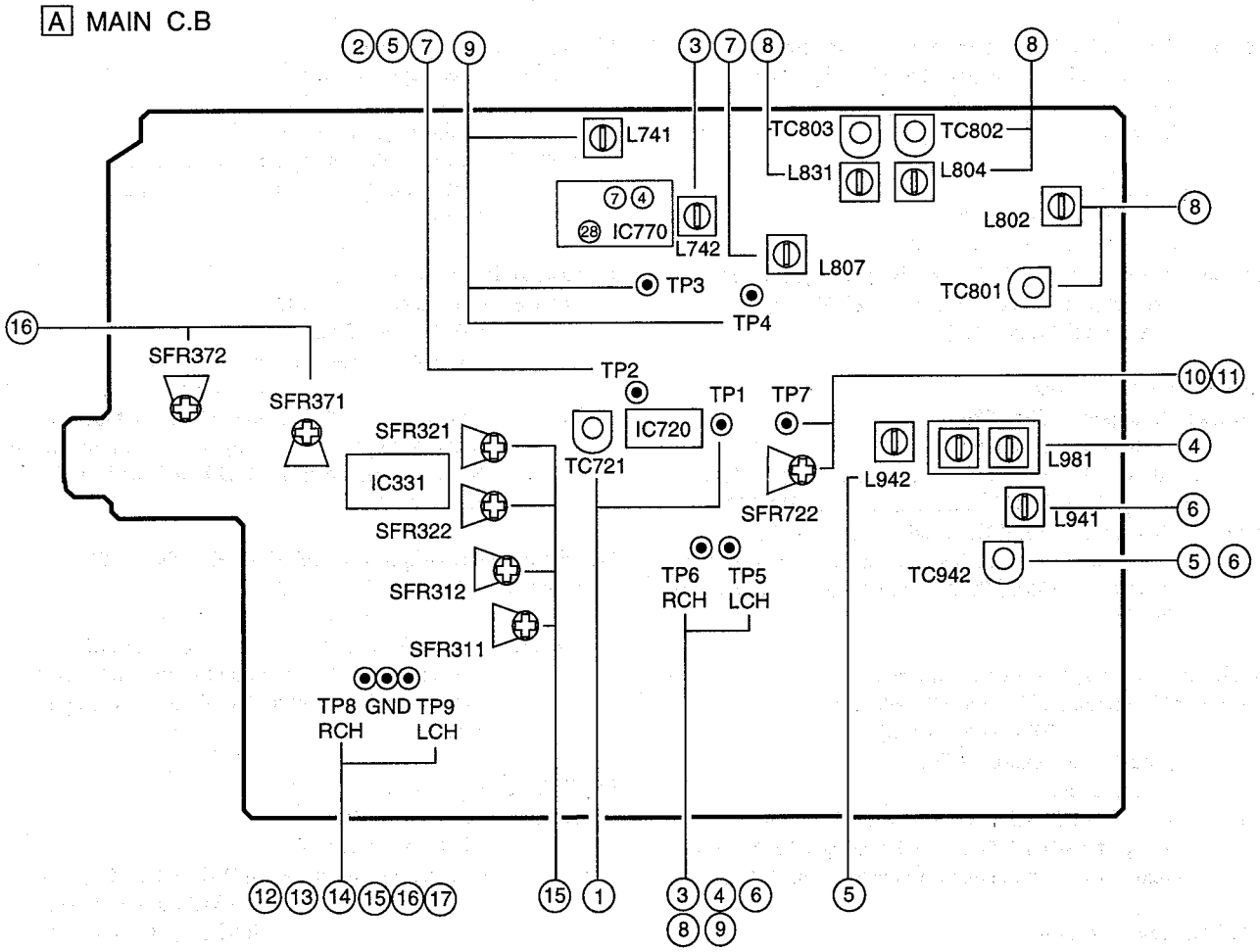
Pin No.	Pin Name	I/O	Description
1~7	G2 ~G8	O	FL display grid output.
8	VDD	-	Power supply terminal. (+5.5V)
9~12	IO BUS3~IO BUS0	I/O	CD/FRONT μ-con command / data bus line.
13	$\overline{\text{O-CCE}}$	O	Chip enable signal input terminal for command & data send / receive.
14	O-BUCK	O	Command & data send / receive clock input terminal.
15	$\overline{\text{I-SURR MUTE}}$	I	"L" input DSP, PROLOGIC off.
16	O-DSP-CE	O	DSP data latch strobe output.
17	$\overline{\text{RESET}}$	I	System reset input.
18	$\overline{\text{O-POWER}}$	O	System power supply ON/OFF output.
19	O-MUTE	O	System mute ON/OFF output.
20	AVSS	-	GND.
21	$\overline{\text{O-KSCAN}}$	O	Switch scan timing output.
22	I-MS	O	DECK MS detected A/D input.
23	I-CD SW	I	CD tray OPEN / CLOSE switch signal.
24	$\overline{\text{I-HOLD}}$	I	When AC power is not supplied, the controller is held. Clock stop & memory maintain.
25	I-MIC	I	Mic level A/D input for auto vocal fader.
26	I-KEY0	I	KEY0 A/D input.
27	I-KEY 1	I	KEY1 A/D input.
28	I-KEY 2	I	KEY2 A/D input.
29	AVDD	-	A/D converter power supply terminal.
30	AVREF	I	A/D converter reference voltage.
31	I-TMBASE	I	Input a reference clock signal (8Hz) to the clock from PLL IC (LC72131).
32	NC	-	Not used.
33	VSS	-	GND.
34	X1	-	4.19MHz oscillator circuit.
35	X2	-	
36	$\overline{\text{O-C-SHIFT}}$	O	Center frequency switch.
37	NC	-	Not used.
38	O-PLL-CE	O	Chip enable output for tuner PLL IC (LC72131).
39	O-DATA	O	Serial data to main board.
40	O-CLOCK	O	Clock signal to main board.
41	O-FSTB	O	Front shift register data latch strobe output.
42	O-MSTB	O	Main shift register data latch strobe output.
43	O-HSP	O	Deck motor high speed ON/OFF output.
44	O-REC SEL	O	Tape / Aux recording selection.
45	$\overline{\text{I-TUNE/IFC}}$	I	SD detected input or serial data input of IF count to and from Tuner.
46	$\overline{\text{I-SENS ST}}$	I	Stereo detected input to and from Tuner.
47	$\overline{\text{I-RMC}}$	I	System remote controller input.
48	IC	-	Internally connected to Vss.
49	$\overline{\text{O-SOL2}}$	O	DECK 2 solenoid ON/OFF output.
50	$\overline{\text{O-SOL1}}$	O	DECK 1 solenoid ON/OFF output.

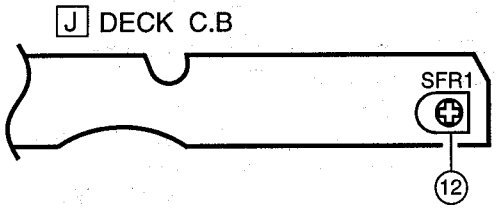
Pin No.	Pin Name	I/O	Description
51	$\overline{\text{O-MOTOR}}$	O	DECK motor ON/OFF output.
52	VDD	-	Power supply terminal. (+5.5V)
53	P23/CST1	I/O	FL display segment output / Deck 1 cassette switch input.
54	P24/CAM1	I/O	FL display segment output / Deck 1 cam switch input.
55	P22/AUTO1	I/O	FL display segment output / Deck 1 auto stop signal input.
56	P21/AUTO2	I/O	FL display segment output / Deck 2 auto stop signal input.
57	P20/CAM2	I/O	FL display segment output / Deck 2 cam switch input.
58	P19/REB	I/O	FL display segment output / Deck 2 side B Rec switch input.
59	P18/CST2	I/O	FL display segment output / Deck 2 cassette switch input.
60	P17/REA	I/O	FL display segment output / Deck 2 side A Rec switch input.
61	P16/LW	I/O	FL display segment output / Long wave select input.
62	P15/10K STEP	I/O	FL display segment output / AM 10k step selection input.
63	P14/FM WIDE	I/O	FL display segment output / FM wide select input.
64	P13/SW	I/O	FL display segment output / Short wave select input.
65	P12/AMST	I/O	FL display segment output / AM stereo select input.
66	P11/OIRT	I/O	FL display segment output / OIRT select input.
67	P10	O	FL display segment output.
68~70	P1~P3	O	FL display segment output.
71	VLOAD	-	Negative pull down voltage.
72~77	P4~P9	O	FL display segment output.
78	O-CLOSE	O	CD tray close output.
79	O-OPEN	O	CD tray open output.
80	G1	O	FL display grid output.

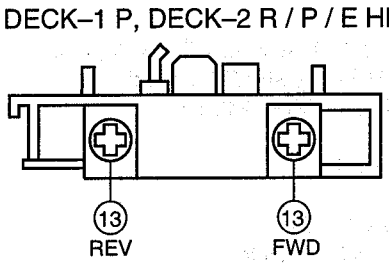
IC, NJW1102AFG1

Pin No.	Pin Name	I/O	Description
1	LLI	I	Lch BPF in.
2	LBPF	O	Lch BPF feed back out.
3	RLI	I	Rch BPF in.
4	RBPF	O	Rch BPF feed back out.
5	LT	O	Lch selector #1 out.
6	RT	O	Rch selector #1 out·
7	LIN	I	Lch signal input.
8	RIN	I	Rch signal input.
9	HOLDC	I	Auto input balance control.
10	VCC	–	Power supply.
11~13	NGC 3~1	I	Noise sequencer control.
14,15	NC	–	Not connect.
16	VDD	–	Power supply.
17	NC	–	–
18	DATA	I	Serial data input.
19	SCK	I	Serial clock input.
20	REQ	I	Serial request (strobe) input.
21	IDS	I	IC select sw.
22	VSS	–	GND.
23	LOUT	O	Lch serial output.
24	ROUT	O	Rch serial output.
25	AUX1	O	AUX1 output (serial data change parallel output.
26	CT	O	Cch output (before trimmer).
27	C-OUT	O	Cch output (after trimmer).
28	ST	O	Sch output (before trimmer).
29	S-OUT	O	Sch output (after trimmer).
30	CMC	I	Center mode control.
31	SMRO	O	Sch amp (front L,R mix) output.
32	NC	–	–
33	SMRI	I	Sch amp (front L,R mix) input.
34	AUX2	O	AUX2 output (serial data change parallel output).
35	SD	O	Selector #2 out (to delay IC).
36	SIMBB	I	Selector #2 input B (L-R).
37	SIMBA	I	Selector #2 input A (L+R).
38	L+R	O	L+R ch output.
39	L-R	O	L-R ch output.
40	GND	–	Gnd.
41	VREF	I	VREF in.
42	VREFG	O	Vref out.
43	IREF	I	Iref in.
44	DBIBN	O	Output to modify dolby B IC (inclused NJW1102).
45	LPIN	I	From delay input.
46~48	DBC 1~3	I	Dolby B NR control.
49	NC	–	–
50~55	PSC 1~6	I	Dual time constant and threshold switches control.
56~63	RLC 1~8	I	Full wave rectifier and log difference amp control.
64	NC	–	–

ELECTRICAL ADJUSTMENT – 1 <TUNER / DECK>







< TUNER SECTION >

1. Clock Frequency Adjustment
   Settings : • Test point : TP1
   • Adjustment location : TC721
   Method : Set to MW 1602kHz and adjust TC721 so that the test point becomes 2052kHz ± 0.01kHz.

2. MW VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to MW 1602kHz and check that the test point is 6.8V ± 1.0V.

3. AM IF Adjustment
   Settings : • Test point : TP5, TP6
   • Ajustment location : L742 ..... 450kHz
   Method : Set to MW 999kHz and adjust L742 so that the test point becomes maximum.

4. MW Tracking Adjustment
   Settings : • Test point : TP-5, TP-6
   • Ajustment location :
   L981 ..... 999kHz
   Method : Set to MW 999kHz and adjust L981 so that the test point becomes maximum.

5. LW VT Adjustment
   Settings : • Test point : TP2 (VT)
   • Ajustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.5V ± 0.05V.

6. LW Tracking Adjustment
   Settings : • Test point : TP-5, TP-6
   • Adjustment location :
   L941..... 144kHz
   TC942 ..... 290kHz

Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

7. FM VT Adjustment
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L807
   Method : Set to FM 87.5MHz & 108MHz and adjust L807 so that test point is more than 1.5V (87.5MHz), and 8.0V ± 0.05V (108MHz).

8. FM Tracking Adjustment
   Settings : • Test point : TP5, TP6
   • Adjustment location :
   L802,L804,L831..... 87.5MHz
   TC801,TC802,TC803..... 108.0MHz
   Method : • The level at 87.5MHz is adjusted by L802, L804, L831. Then the level at 108.0MHz is adjusted by TC801, TC802, TC803 so that the distortion is less than 3%.

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC balance)
   TP5, TP6 (Distortion)
   • Ajustment location : L741
   • Input level : 54dB
   Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%.

10. Auto Stop Level Adjustment
    Settings : • Test point : TP7
    • Adjustment location : SFR722
    • Input level : 18dB
    Method : Set to FM 98.0 MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) by 2dB down.

11. Auto Stop Level Check
    FM
    Settings : • Test point : TP7
    • Input level : Variable
    Method : Set to FM 98.0MHz and check that the test point is 20 dB ± 5 dB.

< DECK SECTION >

12. Tape Speed Adjustment
    Settings : • Test tape : TTA-100
    • Test point : TP8, TP9
    • Adjustment location : SFR1
    Method : Play back the test tape by DECK 2 and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

13. Head Azimuth Adjustment
    Settings : • Test tape : TTA-300
    • Test point : TP8, TP9
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

14. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA-300
    • Test point : TP8, TP9
    Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal is with respect to that of the 315Hz signal is ± 2dB.

15. PB Sensitivity Adjustment
    Settings : • Test tape : TTA-200
    • Test point : TP8, TP9
    • Adjustment location : SFR311 (DECK 1, Lch)
    SFR312 (DECK 1, Rch)
    SFR321 (DECK 2, Lch)
    SFR322 (DECK 2, Rch)
    Method : Play back the test tape and adjust SFRs so that the output level of the test point becomes 300mV.

16. REC/PB Frequency Response Adjustment
    Settings : • Test tape : TTA-602
    • Test point : TP8, TP9
    • Input signal : 1kHz / 10kHz (LINE IN)
    • Adjutment location : SFR371 (Lch)
    SFR372 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

17. REC/PB Sensitivity Check
    Settings : • Test tape : TTA-602
    • Test point : TP8, TP9
    • Input signal : 1kHz (LINE IN)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz signals and check that the output is 17mV ± 3dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	8dB ± 6dB
(THD 3%)	[at 87.5MHz]
	7dB ± 6dB
	[at 98.0MHz / 108.0MHz]
S/N 50dB Quieting sensitivity :	
	34dB ± 5dB
	[at 87.5 / 98.0 / 108.0MHz]
Signal to noise ratio :	More than 59dB(STEREO)
	More than 60dB(MONO)
	[at 98.0MHz]
Distortion :	Less than 2.0% (STEREO)
	Less than 1.3% (MONO)
	[at 98.0MHz]
Auto stop level :	22dB ± 10dB [at 98.0MHz]
Stereo separation :	More than 20dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

<AM(MW) SECTION>

Sensitivity :	52 ~ 64dB
(S/N 20 dB)	[at 603kHz]
	50 ~ 62dB
	[at 999kHz]
	50 ~ 62dB
	[at 1404kHz]
Signal to noise ratio :	More than 36dB
	[at 999kHz]
Distortion :	Less than 1.5%
	[at 999kHz]
Auto stop level :	40dB ~ 65dB
	[at 999kHz]
Intermediate frequency :	450kHz

<LW SECTION>

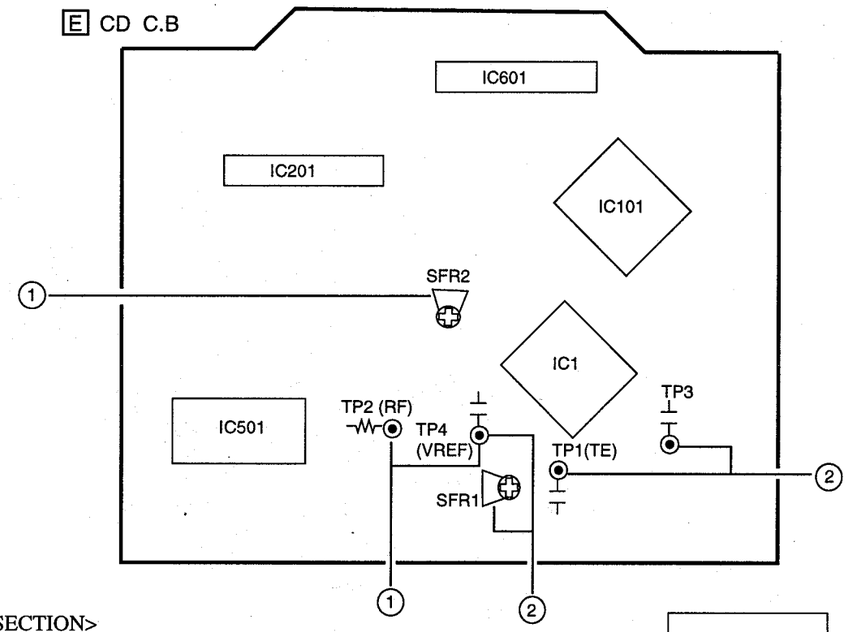
Sensitivity :	59 ~ 69dB (144kHz)
(S/N 20dB)	57 ~ 67dB (198kHz)
	55 ~ 65dB (290kHz)
Distortion :	Less than 1.5% (198kHz)
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.4%
	(R.M.S)
Take-up torque :	30 ~ 55g-cm
	(FWD, REV)
F.F & REW torque :	75 ~ 180g-cm
Back tension :	2 ~ 7g-cm
	(FWD, REV)
PB output level :	2.8V ± 3dB
	(SP OUT 2V)
REC/PB output level :	1.6V ± 3dB
	(SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0%
Noise level (PB) :	Less than 300mV
	(NORM, SP OUT 2V)
	Less than 150mV
	(CrO2, SP OUT 2V)
Noise level (REC/PB) :	Less than 25mV/12mV
	(NORM, SP OUT 2V, Dolby OFF linear / WTD)
	Less than 18mV/10mV
	(CrO2, SP OUT 2V, Dolby OFF linear / WTD)
Crosstalk :	More than 55dB
	(1kHz, 0VU)
Channel separation :	More than 40dB
	(1kHz, 0VU)
Erasing ratio :	More than 60dB
	(at 125Hz, 10VU)
Test tape :	TTA-602 (NORMAL)
	TTA-610 (CrO2)

ADJUSTMENT – 2 <CD>

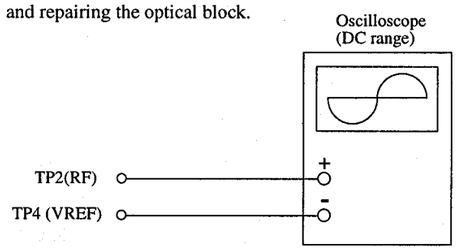
E CD C.B



<CD SECTION>

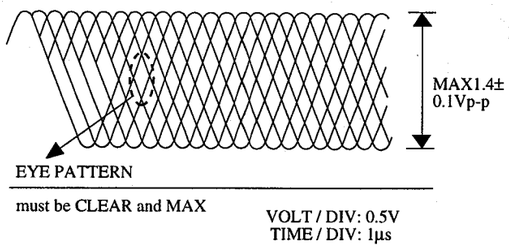
Note : Connect a probe (10:1) of the frequency counter or the oscilloscope to a test point.

1. Focus Bias Adjustment
   Make the focus bias adjustment when replacing and repairing the optical block.

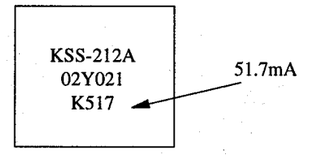


1) Connect an oscilloscope to the test points TP2 (RF) and TP4 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4) Adjust SFR2 so that RF signal of the test point TP2 (RF) is MAX and CLEARREST.

RF signal waveform

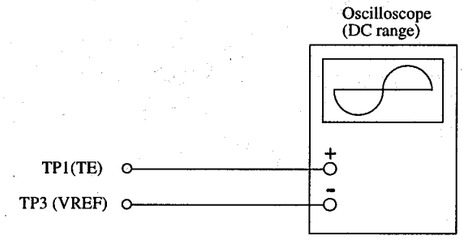


Note : The current of the laser signal can be checked with the voltages on both sides of R2 (10Ω). The difference for the specified value shown on the level must be within ± 6.0mA.

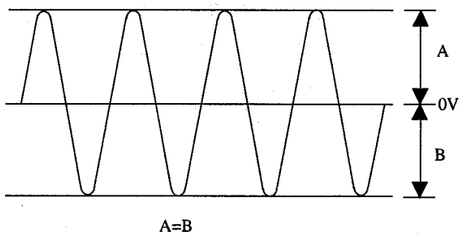


Laser current Iop = $\frac{\text{Voltage across R2}}{10\Omega}$

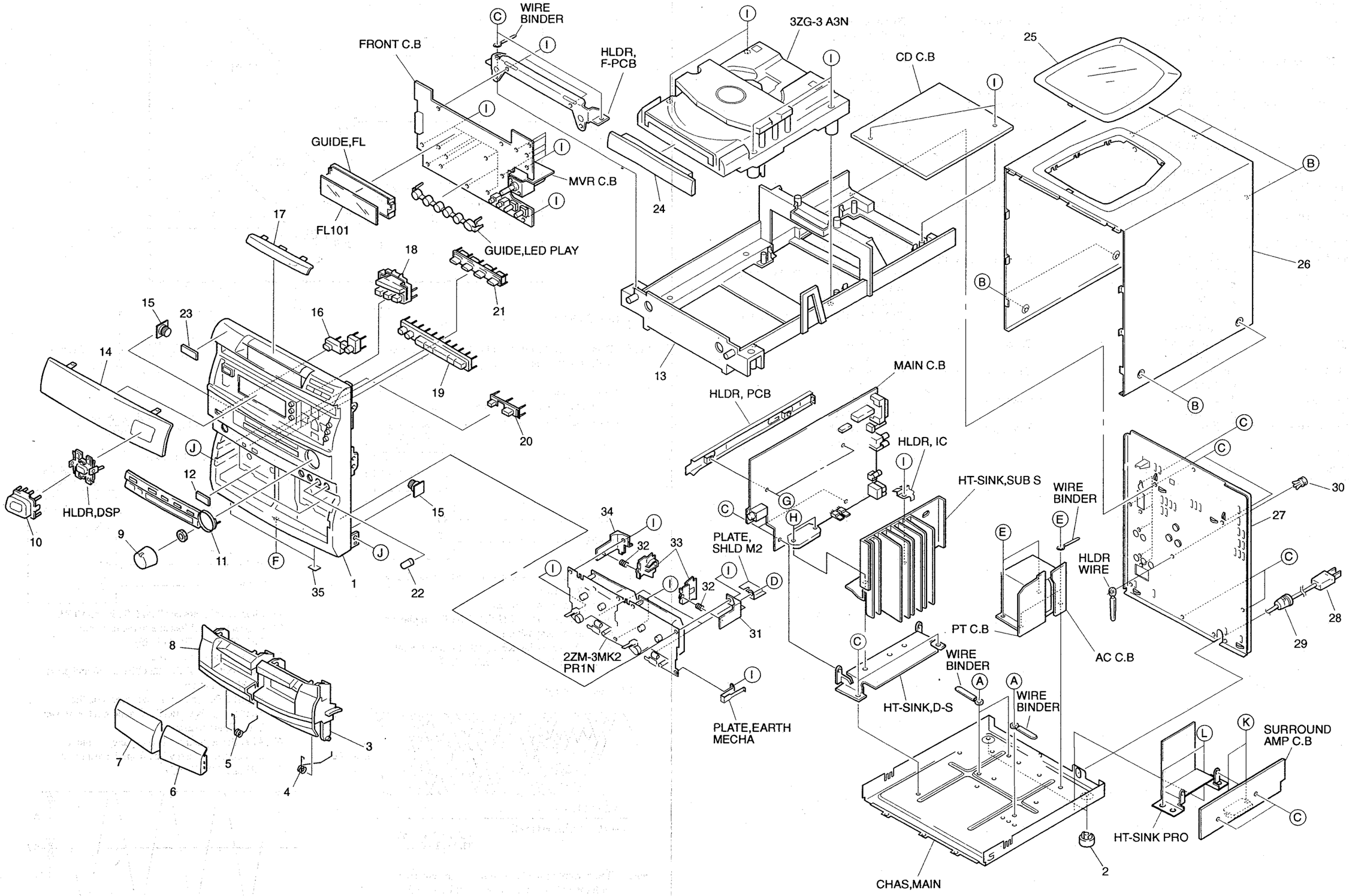
2. Tracking Balance Adjustment



1) Short circuit between TP4 (VREF) and TP3.
2) Connect an oscilloscope to the test points TP1 (TE) and TP4 (VREF).
3) Turn on the power switch.
4) Insert test disc TCD-782 (YEDS-18) and press the PLAY button.
5) Adjust SFR1 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
6) After the adjustment is completed, remove the connected lead wires from the test point TP3 and TP4(VREF).



MECHANICAL EXPLODED VIEW 1/1

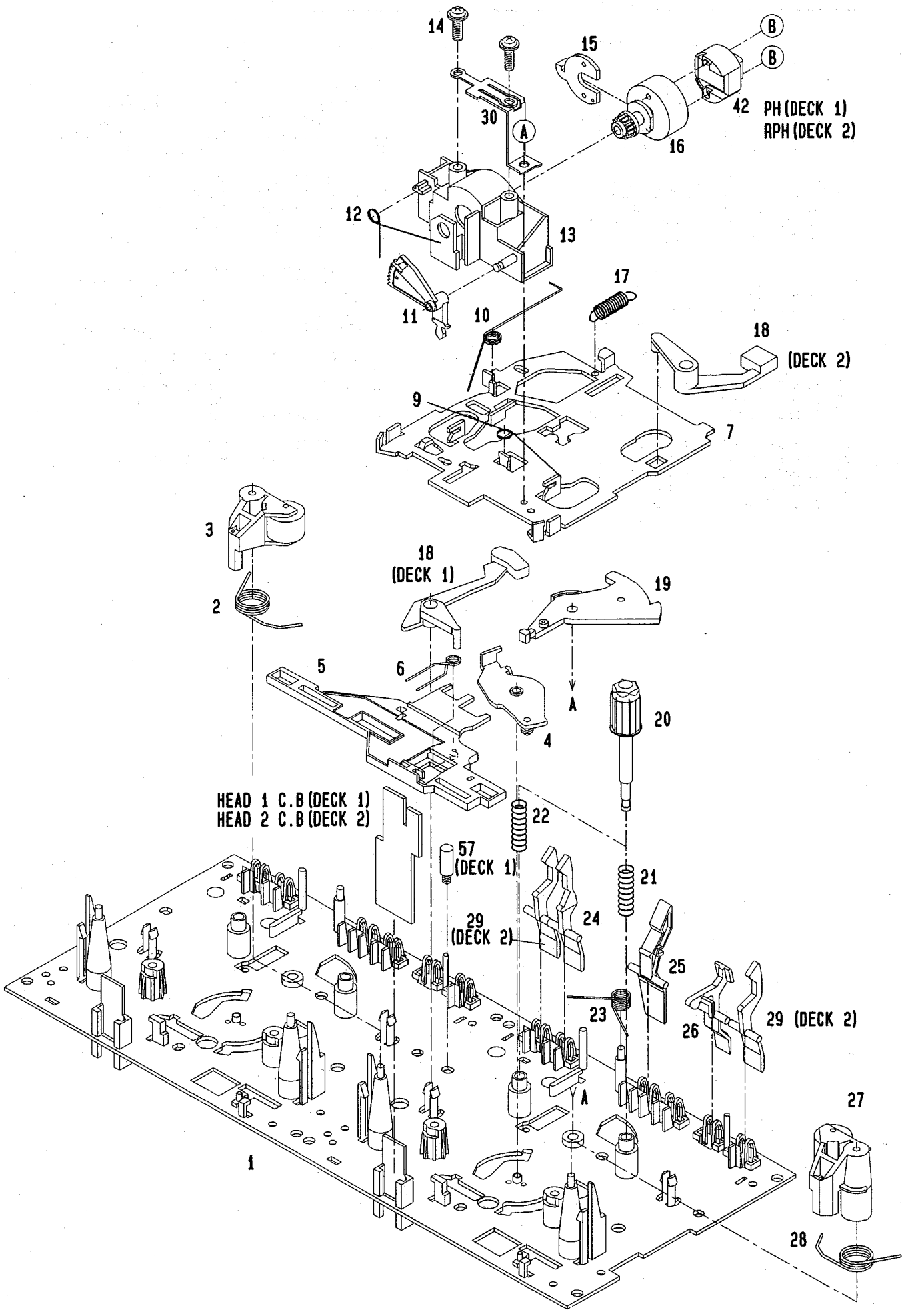


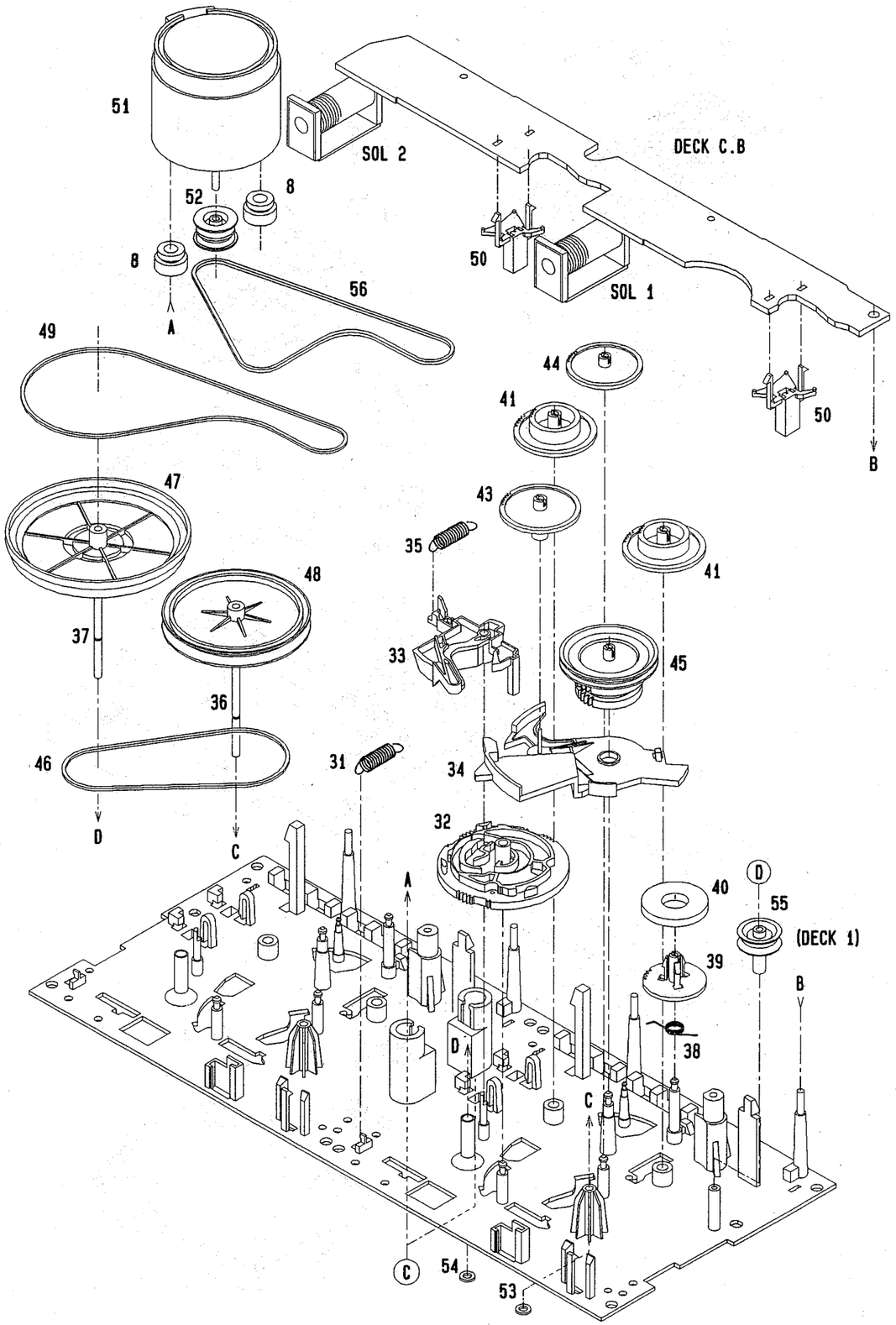
MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NES-001-010		CABI,FR E (ST)
2	87-085-221-010		FOOT, H 13.5
3	86-NFS-014-010		BOX,CASS R E(ST)
4	82-NF5-219-010		SPR-T,EJECT 2(SIN)
5	82-NF5-218-010		SPR-T,EJECT 1(SIN)
6	86-NF5-007-010		WINDOW,CASS R
7	86-NF5-006-010		WINDOW,CASS L
8	86-NFS-013-010		BOX,CASS L E(ST)
9	86-NE5-014-010		KNOB,RTRY MAIN
10	86-NES-005-010		KEY,DSP (ST)
11	86-NF5-009-010		PANEL,FUN
12	81-532-080-010		LBL,CASS-COMPT
13	85-NE8-210-110		HLDR,CD
14	86-NFS-020-010		WINDOW,DISPLAY
15	87-063-165-010		OIL-DMPR,150
16	86-NFS-026-010		KEY,POWER (ST)
17	86-NE5-008-010		WINDOW,CD
18	86-NES-004-010		KEY,CD (ST)
19	86-NF5-016-010		KEY,PLAY
20	86-NES-006-010		KEY,KARAOKE (ST)
21	86-NF5-011-010		KEY ASSY,FUN
22	86-NF6-050-010		KNOB,RTRY MIC M
23	82-NE6-067-010		BADGE,AIWA 30N
24	86-NES-007-010		PANEL,TRAY (ST)
25	84-CE4-018-010		WINDOW,CD
26	86-NES-002-010		CABI,STEEL S (ST)
27	86-NES-003-010		PANEL,REAR EZSTNM
⚠ 28	87-050-079-010		AC CORD ASSY,E BLK
29	87-085-185-010		BUSHING,AC CORD(E) CM-22B
30	87-084-077-010		RIVET NYL3.5-4.5
31	82-NF5-227-010		HLDR,LOCK 2N
32	82-NF5-228-010		SPR-C,LOCK
33	82-NF5-229-010		PLATE,LOCK
34	82-NF5-226-010		HLDR,LOCK 1N
35	80-VT1-202-010		FELT,12.5-15.5-2
A	87-067-585-010		BVTT+4-6
B	87-067-641-010		UTT2+3-8 W/O SLOT BLK
C	87-067-579-010		BVT2+3-8 W/O SLOT
D	87-571-032-410		VIT+2-3
E	87-078-083-010		BVTT+4-8 SWCH16A SEMS
F	87-067-716-010		BVTT+3-6 BLK
G	87-078-084-010		BVTT+3-6 W/CONVEX
H	87-067-698-010		BVT2+3-18 W/O SLOT
I	87-067-703-010		BVT2+3-10 W/O SLOT
J	87-591-094-410		QIT+3-6
K	87-067-581-010		BVT2+3-15 W/O SLOT
L	87-067-584-010		BVT2+3-6 W/O SLOT

TAPE MECHANISM EXPLODED VIEW 1/1



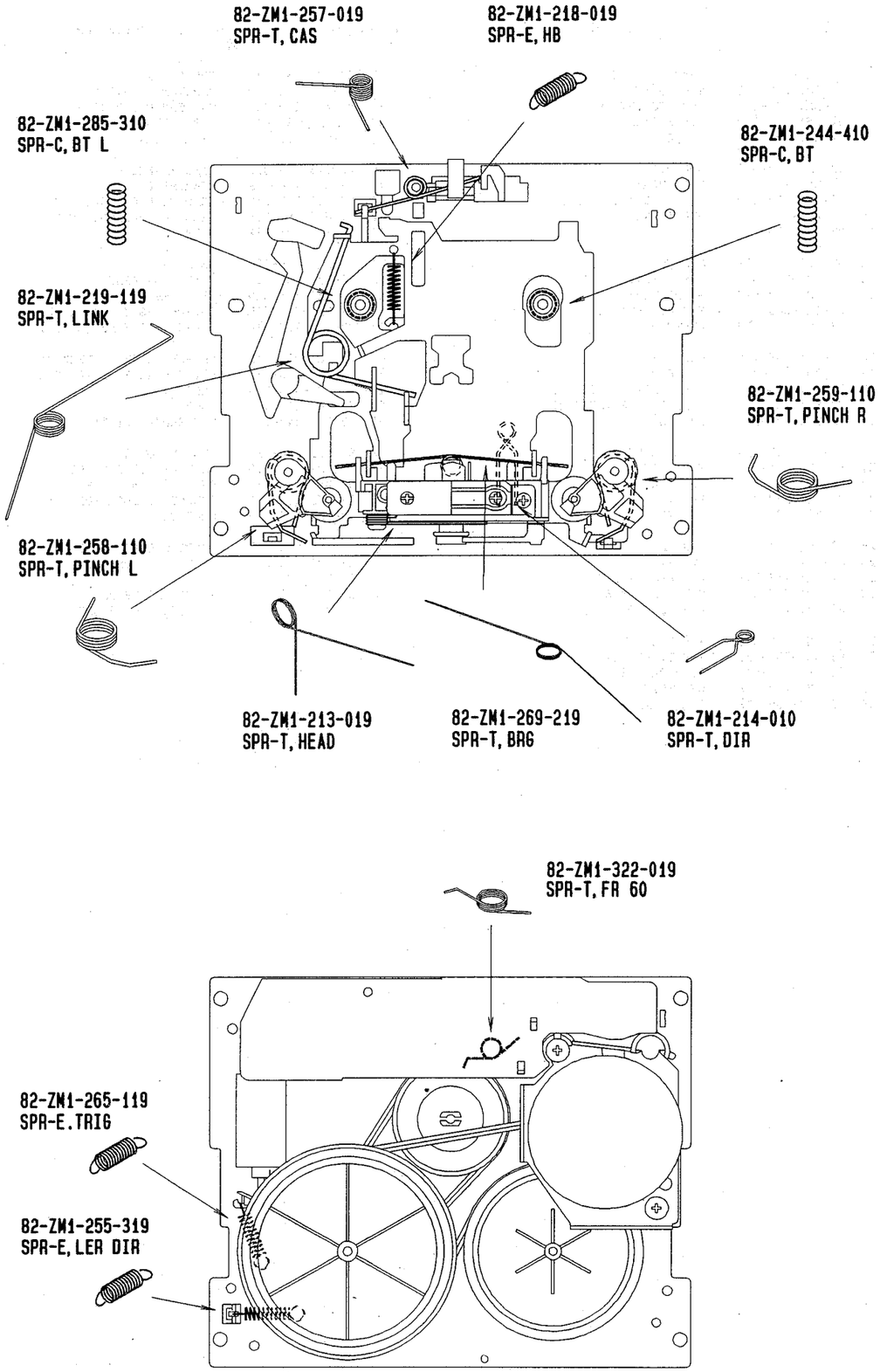


TAPE MECHANISM PARTS LIST 1 / 1

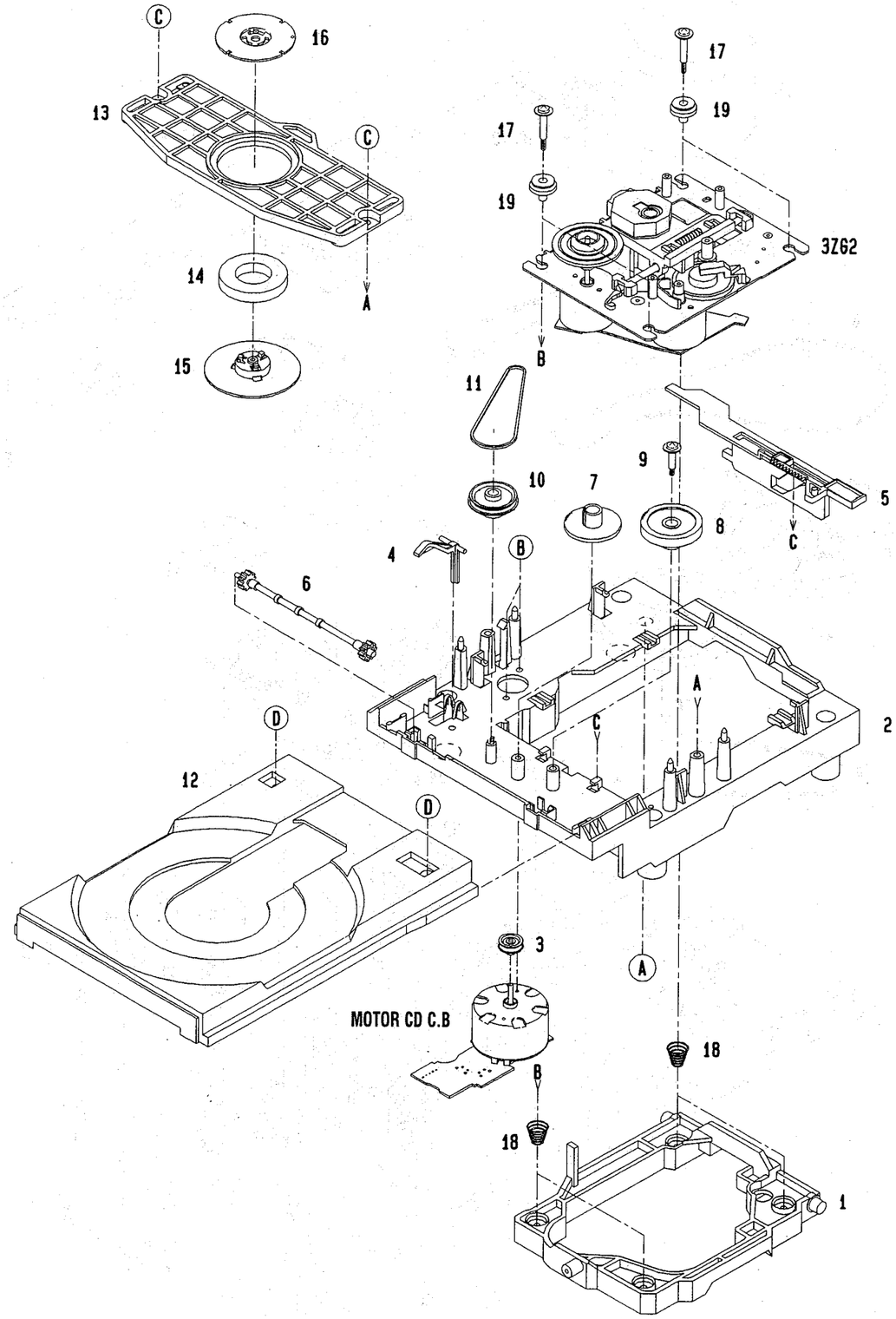
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-248-519		LVR ASSY,PINCH L
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-253-519		LVR ASSY,PINCH R
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
30	82-ZM1-298-010		SPR-P,EARTH
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-31K		GEAR,REEL
42	87-046-355-019		HEAD,PH HADKH2529B(PH)
42	87-046-356-019		HEAD,RPH HADKH5581B(RPH)
43	82-ZM1-225-21K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM1-228-810		SLIP DISK ASSY
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-238-81K		FLY-WHL ASSY,R (DECK 2)
47	82-ZM3-210-71K		FLY-WHL ASSY,R2 (DECK 1)
48	82-ZM1-235-51K		FLY-WHL ASSY,L (DECK 2)
48	82-ZM3-208-61K		FLY-WHL ASSY,L2 (DECK 1)
49	82-ZM3-313-019		BELT R10
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-202-019		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-304-110		PULLEY,COUPLER (DECK 1)
56	82-ZM3-312-019		BELT P10
57	82-ZM3-216-019		SHAFT,COUPLER N(DECK 1)
A	82-ZM1-315-010		S-SCREW,GVIDE TAPE
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-067-972-019		PW,1.05-3-0.25 SLT

SPRING APPLICATION POSITION



CD MECHANISM EXPLODED VIEW 1/2

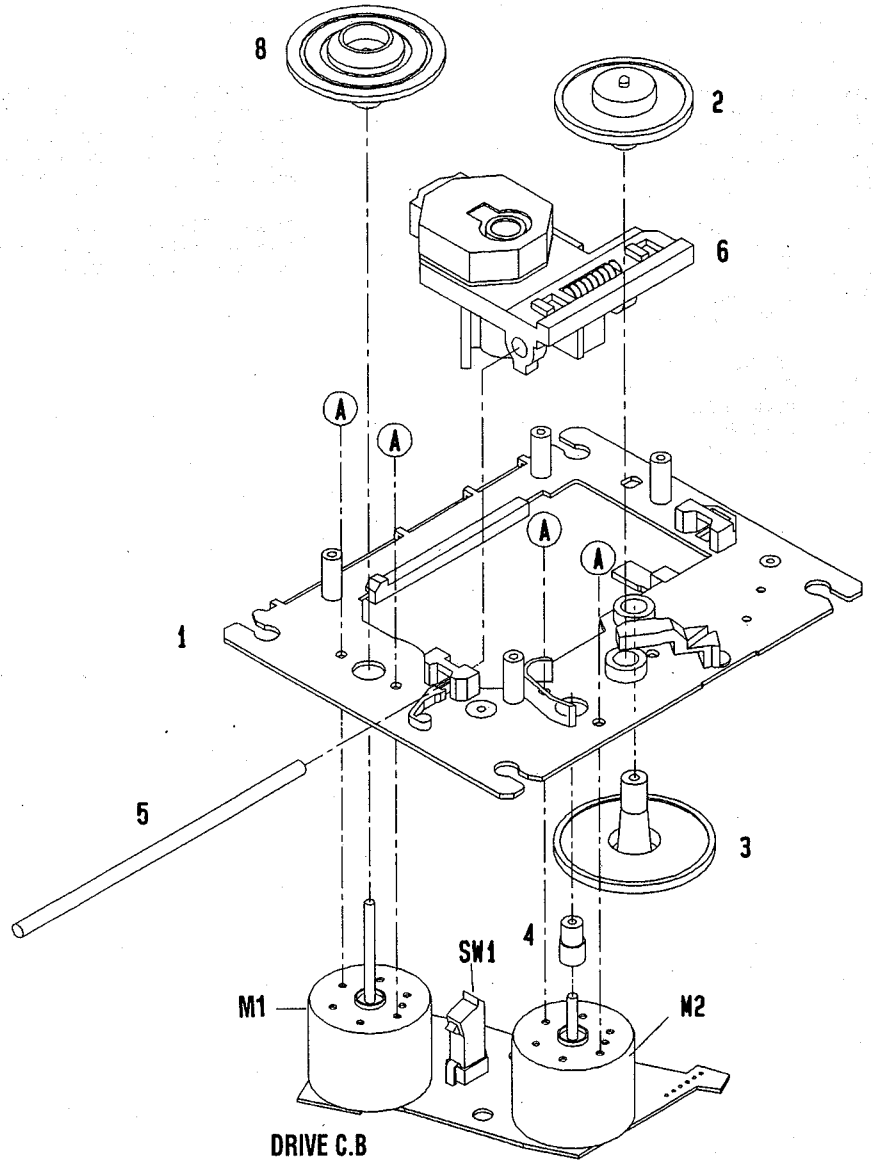


CD MECHANISM PARTS LIST 1 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG3-202-01K		HLDR,MECH
2	83-ZG3-228-21K		CHAS,L6
3	83-ZG3-208-01K		PULLEY,MOTOR
4	83-ZG3-213-01K		LVR,SW
5	83-ZG3-209-01K		CAM,SLIDE
6	83-ZG3-207-01K		GEAR,TRAY
7	83-ZG3-204-01K		GEAR,C
8	83-ZG3-205-01K		GEAR,D
9	83-ZG3-217-019		S-SCREW,GEAR D
10	83-ZG3-220-11K		GEAR,PULLEY 2
11	83-ZG3-214-019		BELT,L
12	83-ZG3-203-61K		TRAY,CD
13	83-ZG3-210-01K		HLDR,CHUCK
14	83-ZG3-602-010		RING,MAG
15	83-ZG3-212-01K		CAP,DISC
16	83-ZG3-219-01K		PLATE,CLAMP
17	81-ZG1-254-019		S-SCEW,MECH HLDR
18	83-ZG3-216-019		SPR-C,L
19	83-ZG3-215-019		CUSH-G,MAIN
A	87-067-945-119		VFT2+3-12(F10)
B	87-251-071-119		U+2.6-4
C	87-512-074-219		VFT2+2.6-8
D	87-352-075-219		VT2+2.6-10

CD MECHANISM EXPLODED VIEW 2/2



CD MECHANISM PARTS LIST 2 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-202-71K		O-SERT S ASSY,S
2	83-ZG2-204-419		GEAR,A
3	83-ZG2-205-219		GEAR,B
4	83-ZG2-220-01K		GEAR MOTOR 2
5	83-ZG2-207-119		SHAFT,SLIDE
6	87-070-109-019		KSS 212A,PICKUP UNIT
8	83-ZG2-233-019		TURN TABLE,A5
A	87-261-032-219		SCREW V+2-3

SPEAKER PARTS LIST (SX–CR423)

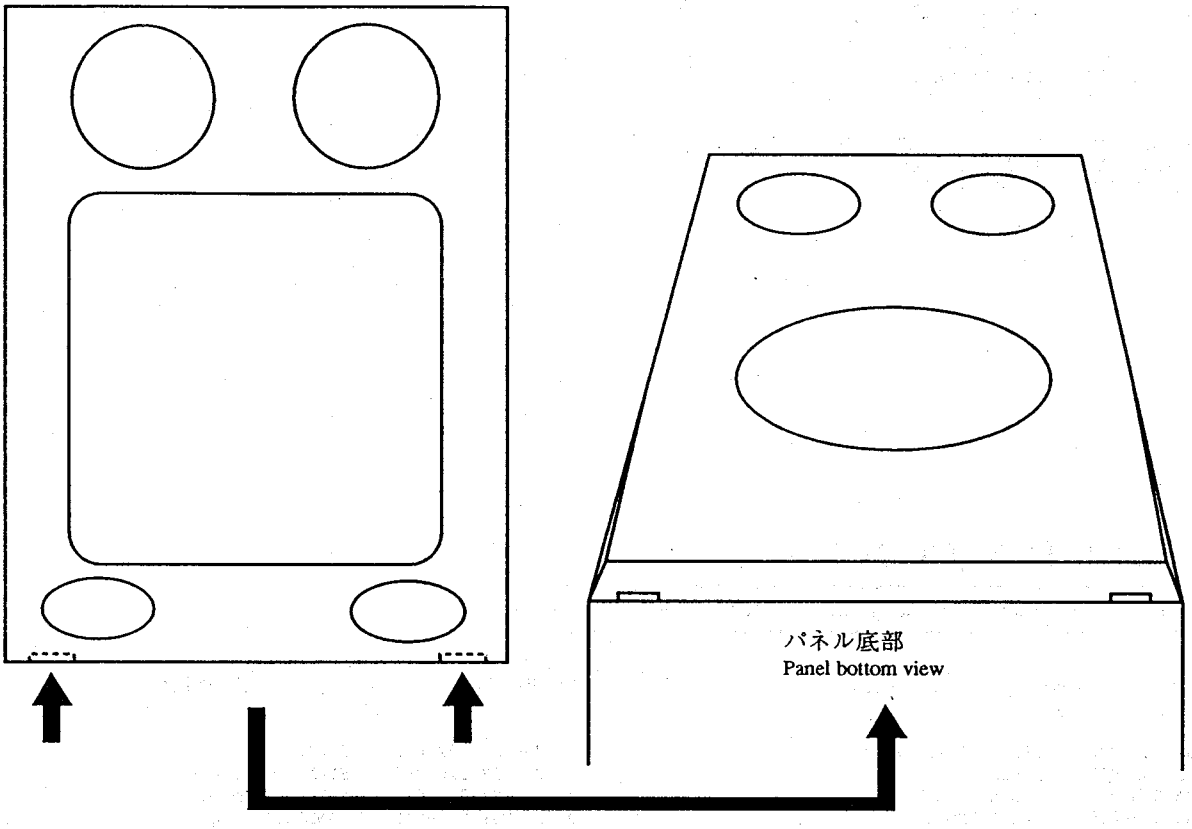
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	85-NSX-005-010		GRILLE FRAME ASSY
2	85-NSX-601-010		SPEAKER
3	81-VSA-010-010		SPEAKER CORD
4	85-NSX-009-010		PANEL FRONT
5	85-NSY-010-010		GRILLE FRAME ASSY
6	85-NSY-602-010		SPEAKER
7	83-NSM-010-010		SPEAKER CORD D
8	85-NSY-011-010		PANEL,FRONT ST
9	85-NSY-012-010		PANEL,REAR ST

SPEAKER DISASSEMBLY INSTRUCTION (SX-NAV70)

矢印の位置にマイナスドライバーを差し込んで、パネルをはずして、各々のスピーカー・ユニットのビスを取り、スピーカー・ユニットをはずしてください。

Insert a flat - bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.



SPEAKER PARTS LIST (SX-NAV70)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NST-012-010		PANEL FR R ST
2	86-NST-013-010		PANEL FR L ST
3	86-NST-003-010		PANEL BA
4	86-NST-006-010		GRILLE FRAME ASSY
5	86-NS5-608-010		SPEAKER W 140
6	86-NST-604-010		SPEAKER T 60
7	82-NSE-610-010		CERAMIC
8	83-NS8-009-010		DIAPHRAGM
9	83-096-614-010		SPEAKER CORD

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL